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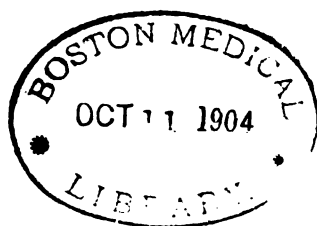
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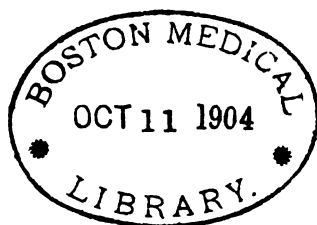
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ORIGINAL ARTICLES.

HODGKIN'S DISEASE (LYMPHADENOMA) OR LYMPHO-SARCOMA? A CLINICAL STUDY OF A CASE.¹

By JOHN LINDSAY STEVEN, M.D.

FROM a scientific point of view it is always an unsatisfactory proceeding to call a newly discovered disease by the name of its discoverer, and in this respect the baptism of Hodgkin's disease is no exception to the rule just stated. Hodgkin's disease is still the puzzle to physicians and pathologists that it was to the eminent discoverer of the affection himself, and the puzzle is more difficult for us on account of our more extensive and accurate knowledge of etiology and pathological histology. That lymphadenoma, to employ one of the many synonyms of the disease, is to be distinguished from tubercular and inflammatory affections of the lymphatic glands, was as clear to Hodgkin in 1832 as it is to ourselves. As I pointed out in 1892, in my monograph on *The Pathology of Mediastinal Tumours*, a glance at Hodgkin's original paper is quite sufficient to convince us of this. Perhaps, if I quote what I then wrote it will make this plain.²

"The chief phenomena of the disease of the lymphatic

¹ Read before a meeting of the Glasgow Medico-Chirurgical Society held on 16th October, 1903.

² *The Pathology of Mediastinal Tumours*, London, 1892, p. 10.

glands, which Hodgkin described, are great anæmia and dropsy, enlargement of all the lymphatic glands of the body, and in many, though not in all, a peculiar deposit in the spleen. Perhaps, in order to make this plain, I cannot do better than quote a few sentences from his paper.¹ All his 'cases agree in the remarkable enlargement of the absorbent glands accompanying the larger arteries; mainly the glandulæ concatenatæ in the neck, the axillary and inguinal glands, and those accompanying the aorta in the thorax and abdomen.' The 'enlargement of the glands appeared to be a primitive affection of these bodies rather than the result of an irritation propagated to them.' Any scrofulous condition is regarded as an 'accidental concomitant to the idiopathic interstitial enlargement of the absorbent glandular structure throughout the body;' and the affection is not to be looked upon as inflammatory in the usual acceptance of that term."

That it is essential to distinguish Hodgkin's disease or lymphadenoma from lymphosarcoma, particularly as met with in the mediastinum, is also, I think, equally clear.

The enormous advance during recent years in our knowledge of the minute pathology of the blood has raised additional difficulties in the elucidation of the pathology of lymphadenoma, difficulties of which Hodgkin could have had no conception. We have now to consider the relationship of the affection to leukæmia and allied states of the blood. That Hodgkin's disease is not leukæmia must, I think, be admitted, although it must also be granted that very often it is only by the most careful examination of the blood that we can make a differential diagnosis. If all this be true, then we can understand another difficulty which almost inevitably arises from the designation of the disease by the name of its discoverer. It is this, that many affections must have been called, and recorded in medical literature as, Hodgkin's disease, which were something quite different. Of this I have no doubt, and I believe that Hodgkin's disease is a very much rarer affection than the frequent accounts of it in medical writing would lead us to suppose.

With these preliminary remarks, I propose now to submit to the Society the clinical history of a case, which, I think, conforms pretty closely to the essential requirements of Hodgkin's disease, although I am prepared to admit that it is perhaps not possible to exclude altogether a diagnosis of lymphosarcoma in the sense that I use this term in my book on *Mediastinal Tumours*.

¹ *Medico-Chirurgical Transactions*, London, 1832, vol. xvii, p. 68.

The clinical history has been entered in the Ward Journal by my house physician, Dr. Marshall, and I have myself added one or two clinical notes.

Peter G., a miner, æt. 56, was admitted to Ward 12 of the Glasgow Royal Infirmary on 3rd October, 1903, complaining of general weakness, associated with enlargement of the lymphatic glands and pain in the right lumbar region and in the right leg.

The illness began in July, 1903, with a feeling of stiffness in the right leg. The limb from the knee downwards felt "dead," and occasionally was the site of sharp lancinating pain shooting down to the very tips of the toes. Otherwise at this time he felt in good health, and was able to commence his work at the end of the Fair holidays. He was, however, unable to continue at his occupation, and had to give it up about the end of July on account of the pain in the right leg.

Six weeks before admission, an aching pain developed over the lumbar vertebræ, and a fortnight later the pain left the back and settled in the right lumbar region, where it still persists. The pain is at times paroxysmal in character, and shoots into the pit of the stomach.

Three weeks before entering the infirmary he first noticed a hard swelling in his left axilla. In rapid succession hard swellings appeared in the right axilla and in the right and left inguinal regions. About this time his appetite, which had hitherto been fairly good, became very poor. After meals he had a sensation of epigastric fulness, without actual pain. Along with this he had attacks of vertigo, but there was no sickness or vomiting. During these three weeks he rapidly lost flesh and strength. He became very short of breath; felt heavy and dull; and was disinclined for the slightest exertion. The bowels moved regularly without discomfort, and the average daily quantity of urine would appear to have been normal.

His previous health had always been good, and his habits had been on the whole temperate. He had, however, for twelve months before the onset of his illness been working in a very damp pit. His family history is unimportant.

His condition during the first day or two of residence was as follows:—He preferred the left lateral decubitus, as it relieved the pain in the right lumbar region. His appearance was suggestive of anæmia, the complexion being pale, with a slightly lemon-yellow tint. The temperature was sub-febrile;

the pulse, which was regular in force and rhythm, ranged between 90 and 100. The tongue was moist and clean.

On the left side of the neck and in the supra-clavicular area four enlarged glands could be felt. They were about the size of haricot beans, and freely movable. In the right axilla there was a chain of three enlarged glands, separable from one another, and each about the size of a cherry. The left axilla was the seat of a large rounded glandular mass, about the size of a pigeon's egg, which was freely movable. At the right elbow, above the internal condyle, three small but quite palpable enlarged glands could be felt. In both inguinal regions there was marked enlargement of both chains of glands, especially on the left side. He also complained of sudden attacks of pain in the right leg, as if the limb had been hit. No very definite neurotic symptoms could be made out in the limb, however.

With the exception of medium-sized râles at the left base behind, the lungs presented healthy characters, and nothing abnormal could be detected in the heart.

No enlargement of the liver could be made out, but a palpable spleen was easily detected in the left upper quadrant of the abdomen.

4th October, 1903: Note by Dr. Lindsay Steven.—The patient certainly does not look 56 years of age; the expression is somewhat oppressed, and the complexion, of a lemon-yellow tint, suggestive rather of a cachectic condition. The glandular enlargements are on the whole accurately described in the foregoing clinical report, but the mass in the left axilla is much larger than a pigeon's egg. A comparative dulness is detected to-day at the left base behind, the upper limit of which is about the level of the eighth dorsal spine, the outer margin merging into clear percussion in the axilla. In the dull area the respiratory murmur is of vesicular type, and accompanied by râle, chiefly during inspiration, which is sometimes like friction, at other times like moist fine intrapulmonic râle. He has no cough. It is thought that the erectores spinæ to the right of the middle line and between the second and fourth lumbar spines are distinctly fuller and more resistant in the sitting posture than those on the left side. In the recumbent decubitus, with bimanual palpation of the right lumbar region, it is thought that a deep-seated rather indefinite rounded mass can be felt. The lower edge of the liver cannot to-day be freely palpated, and it is impossible to be sure whether the mass just referred to is connected with the liver, or is some other structure situated below it. It is in

this region that he complains of his pain, but palpation is painless. The mass described in the left hypochondriac region, though not capable of precise definition, is quite undoubtedly an enlarged spleen. The tongue is dry; the temperature since admission ranging between 99° and 100°; the pulse between 80 and 90; the urine presents normal characters.

*Blood Estimations*¹:—

<i>4th October, 1903.</i> —		
Hæmoglobin, . . .	88 per cent.	
Red blood corpuscles,	4,567,000.	
White „ „	6,789.	
<i>5th October, 1903.</i> —		
Hæmoglobin, . . .	80 per cent.	
Red blood corpuscles,	4,762,000.	
White „ „	8,651.	
<i>16th October, 1903.</i> —		
Hæmoglobin, . . .	70 per cent.	
Red blood corpuscles,	4,700,000.	
White „ „	10,651.	

8th October, 1903.—Complaint of “sinking feeling” in the abdomen; sleepless; requiring to sit up in bed.

12th October, 1903.—Much worse; temperature 101° F.; ashy-grey complexion; cold extremities; sits up in bed with severe abdominal pain; much increase of glandular enlargement.

14th October, 1903: Note by Dr. Lindsay Steven.—Patient has become steadily worse since admission, and about the 8th or 9th inst. he began to complain of a severe pain in the front of the abdomen, for which treatment by poulticing was commenced. Coincidentally the temperature began to show larger oscillations, and this morning at 8 A.M., 102.2° F. was recorded. During the last three days the curve has oscillated between 98° F. and 101° F., these oscillations occurring sometimes twice in twenty-four hours. The pulse-rate has also gradually increased from an average of 100 on admission to 112 five days ago, and to over 120 during the last two days. It is thought also that the glandular swellings have become more

¹ *Examination of blood films by Dr. Walter K. Hunter* (14th October, 1903).—Blood films were fixed by heat, and stained with (a) triacid stain; (b) Höffler's stain; (c) hæmatoxylin and eosin; and (d) methylene blue and eosin. A differential count of the white corpuscles showed the polymorphonuclears, 59 per cent; and the mononuclears, 41 per cent. There was a very small proportion of eosinophile cells. The vast majority of the mononuclear cells may be classed as large hyaline cells, though some had a certain amount of basophile granulation in their plasma. Only a very small proportion could be termed large lymphocytes, and there were very few small lymphocytes. None of the mononuclear cells had oxyphile granulation.

pronounced, and to-day the enlarged spleen can be freely manipulated and moved by bimanual palpation. A striking feature this morning is a very marked epigastric pulsation immediately below the xiphoid. This pulsation suggests a forward and downward displacement of the heart, and resembles the beat of the apex rather than the pulse of a dilated right ventricle. The distress of the breathing is very great, especially at night, and probably the abdominal distress of which he complains is more connected with this, and with the cardiac displacement, than with any actual lesion in the abdomen itself. The fulness in the right lumbar region is very marked, and is especially apparent when palpation is practised from behind. His expression is anxious and oppressed, and the complexion is exceedingly pale and livid.

17th October, 1903.—Though manifestly sinking, the patient insisted on going home to the country.

For a diagnosis in this case we are thus dependent upon a study of the clinical and hæmatological facts alone. On the whole, I am inclined to regard it as fulfilling the requirements of Hodgkin's disease or lymphadenoma. The general enlargement of the lymphatic glands, internal as well as external, the marked increase of the size of the spleen, the progressive pallor and debility, and the absence of any striking changes in the blood corpuscles, either numerical or morphological, are phenomena which justify the application to the case of Hodgkin's statement that "this enlargement of the glands appeared to be a primitive affection of these bodies rather than the result of an irritation propagated to them from some ulcerated surface or other inflamed texture through the medium of their inferent vessels; and that although in some instances the glands so enlarged may contain a little concrete inorganisable matter, such as is known to result from what is called scrofulous inflammation, it is obvious that this circumstance is not an essential character, but rather an accidental concomitant to the idiopathic interstitial enlargement of the absorbent glandular structure throughout the body."

I am inclined to the opinion that the mass which was palpable in the right lumbar region was due to enlargement of the retroperitoneal glands; and that the evidence of downward and forward displacement of the heart indicated a similarly enlarged condition of the deep thoracic glands. I quite admit that it is open to any one to regard the case as one of lymphosarcoma of the abdominal glands; the pain in the right leg and in the right lumbar region indicating that in

all probability the disease began in the abdomen, but the very general, practically universal, enlargement of all the lymphatic glands is not, I think, in keeping with such a view. Lympho-sarcoma I regard as a local malignant affection of the glands, beginning in one or other of the lymphatic areas, capable, no doubt, like other malignant diseases, of metastatic diffusion, but totally different from that "idiopathic interstitial enlargement of the absorbent glandular structure throughout the body" which I believe to be characteristic of Hodgkin's disease or lymphadenoma.

A diagnosis of leukæmia is excluded by the result of Dr. Walter K. Hunter's careful examination of blood films from the case.

SOME OBSERVATIONS ON OCULAR AND OTHER FORMS OF CHRONIC HEADACHE.¹

By JAMES HINSHELWOOD, M.A., M.D., F.F.P.S.G.,
Surgeon to the Glasgow Eye Infirmary.

THERE are few symptoms of disease for which the patient seeks relief from the physician more frequently than for chronic headache, and there are few symptoms of disease which can be produced by such varied causes. To deal with these cases successfully, the practitioner must have an intelligent grasp of the chief causes of this distressing symptom. Accurate diagnosis must precede successful treatment, and in nothing is this more evident than in the treatment of chronic headache. In these days of tabloids, there is too great a tendency to treat symptoms merely by means of drugs, instead of treating them in the only rational way—by the removal of the causes on which they depend.

The medical profession is becoming increasingly alive to the importance of eye-strain as a cause of chronic headache, and hence ophthalmologists in the course of years acquire a very special experience in dealing with this distressing symptom. On looking over my case-books since the beginning of my professional career, I am struck with the increasing numbers of such cases which come under my observation. Scarcely a single day passes without my being called upon to investigate a new case of headache.

¹ Read at a meeting of the Glasgow Northern Medical Society held on 1st December, 1903.

I have therefore thought it might be not unprofitable to others to hear some practical observations on this subject from one who has had an exceptionally large experience in dealing with it.

The diagnosis of the nature of the headache must rest upon a careful search for the condition or conditions upon which it depends. It is important to note, in the first place, the general condition of the patient. If the patient, for example, was strikingly anæmic, then a possible cause for the headache would at once suggest itself. From the general condition, we proceed to note any special circumstances which may bring on or intensify the headache. We carefully observe the time at which the pain generally comes on, its relationship to food, to mental exertion, to the use of the eyes, or any other influences which we suspect may possibly be concerned in its causation.

Sometimes the headache may be dependent upon a single cause, so that the removal of that single cause will completely cure it. Headache due to eye-strain, for example, will entirely disappear when the eye-strain is removed by the patient wearing suitable glasses. On the other hand, it must always be borne in mind that a headache may be due to a number of distinct causes, each of which must be removed before the patient obtains complete relief. I see frequently, for example, cases of obstinate headache in young women, which have not been cured even after years of continuous treatment. The failure is due to the fact that all the factors producing the headache have not been recognised. A very common combination in young women is eye-strain, constipation, and anæmia. Each of these three factors is capable of producing severe headache, and the removal of any one of them will give the patient a certain amount of relief, but complete cure will only be effected when all the factors are dealt with.

Hence the diagnosis of headache is often a difficult task, necessitating a very careful examination of all the organs of the body and of the patient's habits and mode of life. I propose to call attention to a few clinical points, which may be of service to the practitioner in dealing with this common but often very distressing symptom.

The cases of headache which have come under my observation may thus be divided into three classes:—

1. Cases of pure ocular headache, which were completely cured by the prescription of suitable glasses for the patient.

2. Cases where eye-strain was only a factor in the production of the headache and where other factors existed, and hence

where the prescription of glasses only gave a certain amount of relief; cure only being attained when all the causes contributing to its production were removed.

3. Cases in which eye-strain had nothing to do with the production of the headache.

In the *Glasgow Medical Journal* for November, 1900, I have discussed in considerable detail the cases belonging to the first group. In the present paper I will therefore content myself with enumerating some of the most important clinical features of pure ocular headache, and will discuss more fully the cases belonging to the second and third groups, which I did not touch on in my previous paper.

Ocular headache due to eye-strain is certainly one of the most common forms of chronic headache. Judging on the basis of my own experience and that of others, I am quite certain that at least 50 per cent of the cases of chronic headache met with in ordinary practice are due to this cause. Some writers put the percentage as high as 75 or 80 per cent, and I am sure we are certainly not overstating the case when I lay down the frequency at 50 per cent. Though eye-strain is such a common cause of chronic headache, it is very frequently overlooked, because the eye-strain is often quite unaccompanied by any pain in the eyes, but simply expresses itself in the form of headache. When the eye-strain is accompanied by pain or discomfort in the eye, then the attention of patient or physician is at once directed to that organ: but when it manifests itself simply by headache, the real cause is apt to escape observation unless the physician is familiar with this clinical fact. Why eye-strain should simply manifest itself by headache without any discomfort in the eye, we do not know, but we do know from our clinical experience that this is the case.

Another reason why eye-strain so often escapes observation as a cause of headache, is that the headache is often produced by a very slight error of refraction, which scarcely interferes with the patient's visual acuity. This is a clinical fact well worth remembering, that headaches of ocular origin are very frequently due to very slight refractive errors. High errors of refraction associated with very defective vision are not, as a rule, a cause of headaches. I think the probable explanation of this fact is that, with a very high degree of refractive error, the patient's vision is so defective that he abandons all effort to improve it, and hence no strain is thrown upon the ciliary muscle. But with the slight errors, sufficient to produce slight indistinctness and blurring, such, for example, as is

produced by a small amount of astigmatism, the patient is continually endeavouring by irregular contraction of his ciliary muscle to counteract the astigmatism, and get clear images. The constant strain on his accommodation thus produces the distressing symptoms from which he suffers.

In such cases, then, when there is no pain in the eyes, and when the visual acuity is good, it is not to be wondered at that the true cause of such headaches is often unsuspected for long years. But even in such cases there are certain features in the production of the headaches which should suggest to the physician the probability of the headache being due to eye-strain. Whenever the headache is brought on or intensified by the use of the eyes, then suspect its ocular origin. When the headache is ocular, the patient is free from it after the night's rest. He starts the day without a headache, but it begins shortly after he gets up, and becomes worse and worse as the day gets on. If the patient observes that on Sundays, or when away from business, he has no headaches, but that they come on whenever he resumes his daily vocation, then suspect eye-strain. If a lady informs us that whenever she goes out shopping, looking at different articles in the shop windows or in the shops, she returns with a racking headache, then suspect eye-strain. In short, whenever you find that the headache is brought on or intensified by the use of the eyes, or relieved or ameliorated by resting them, then always strongly suspect eye-strain as the probable cause.

In such cases the diagnosis can be made with certainty only by examining the refraction of the patient's eye, under the influence of a mydriatic such as homatropine, with the shadow test, or some of the objective methods. We have now at our command several objective methods for the measurement of the refraction of the eye, which now enables us to estimate all refractive errors with the greatest precision and nicety. The examination with the test-types for this purpose is comparatively worthless, as slight errors, not producing any great change in the visual acuity, may give rise to severe chronic headaches.

The commonest causes of ocular headache are astigmatism and hypermetropia. Myopia does not often produce headache, unless it is accompanied by some degree of astigmatism. In astigmatism and hypermetropia there is a constant strain on the part of the ciliary muscle to counteract the refractive error, and this constant strain is the cause of the headache. Relieve this constant strain, and put the eye in a condition of

rest, and the headache will disappear. A hypermetrope, for example, is using his accommodation from the moment he gets up in the morning until he goes to bed at night. Even for distance he requires the use of accommodation, so that the eye is never in a condition of rest unless when the patient is asleep. In such cases, relief will only be given by the constant wearing of glasses, because in that way alone can we get rid of the element of eye-strain. It is very difficult sometimes to persuade the patient as to the necessity of the constant wearing of the glasses. The patient may be quite content with his distant vision, and the glasses prescribed may not visibly improve it, and yet the constant wearing of the glasses is absolutely necessary if the patient wishes to get rid of his headache, as this can only be done by giving the ciliary muscle rest. I am therefore always very careful to point out to such patients that the glasses are not prescribed in order to make him see better, but in order to let him see with a diminution of strain to the eye, the benefit of which will speedily manifest itself by the relief or disappearance of the headache.

Next to eye-strain, in my experience, toxæmia, or impure conditions of the blood, is the most common cause of chronic headache. The brain must be supplied with pure blood if it is to carry on its work efficiently and harmoniously. If the blood be contaminated with toxic agents, then one of the common symptoms produced is headache. One thing which always makes me suspect a toxic origin for headache is, when it is worst in the morning after sleep. When patients tell me that their headache is worst immediately after waking, before getting out of bed, and that it often improves as the day goes on, I strongly suspect that it is a headache of toxic origin. The toxic elements accumulate in the blood during sleep, and hence the headache is most intense in the morning. When the patient gets up and moves about in the open air, quickening the processes of oxidation by increased rapidity of respiration and pulse-rate, the toxic elements in the blood diminish, and the headache becomes relieved.

Constipation, dyspepsia, rheumatism, and gout are all causes of toxæmic headache. If we wish to get rid of the headache, we must improve the condition of the blood by appropriate treatment directed to the cause. Constipation is by far the commonest cause of toxæmic headache, and in every case of headache the first step in treatment should be to make quite certain that the patient has a free movement of the bowels once in every twenty-four hours. Most forms of headache, except those due to anæmia, are relieved by aperients,

which probably act partly by lessening the amount of blood in the cerebral vessels, and partly by improving the state of the blood.

Next to constipation, gastric disturbance is the most common cause of toxæmic headaches. The pain is generally occipital or vertical, but now and again it is frontal. It is probably caused by the absorption of some toxic substance from the stomach or bowel, some morbid secretion or product of the imperfect digestion of food, or altered bile. Here also the regular use of aperients often gives great relief, by assisting in the elimination of the toxic substances, but cure will only be attained when the gastric disorder is put right. The chronic headache of toxic origin met with in dyspepsia must not be confounded with the severe paroxysmal headaches associated with vomiting, and often preceded by sensory phenomena, which are of purely nervous origin, and known as nervous or sick headaches or megrim. As these sick headaches are paroxysmal, and there is generally perfect freedom between the attacks, they do not fall under the category of chronic headaches, and hence cannot be confused with the various forms of chronic headache which we are considering in the present paper.

Under the heading of toxæmic headache might also be included the headache due to chronic Bright's disease. The severe headache of uræmia in advanced Bright's disease is familiar to all, but it is not so well known that headache may be the very first symptom of this disease which obtrudes itself upon the notice of the patient, and for which the physician is first consulted. I have seen this not infrequently in patients with chronic headache, who had been sent to me in order to determine if the headache was due to eye-strain. In such cases, if nothing be found in the eye, I make it an invariable rule to have the urine carefully examined, and have been frequently rewarded by the discovery of albumen in cases where such a condition had never been suspected. Chronic Bright's disease is a very chronic malady, with a very insidious outset, and it is well to remember that headache may be the very earliest symptom, and hence it should be an invariable rule in all cases of chronic headache to carefully examine the urine.

When the headache is due to Bright's disease, relief will be given by the free action of the bowels, the use of diuretics and diaphoretics, all of which means help in the elimination of the toxic elements from the blood.

Amongst the toxæmic headaches we might also class the

syphilitic headaches. In all cases of chronic headache this is a possible cause, which should never be lost sight of. More especially should we suspect syphilis, if the headache has distinctly nocturnal exacerbations. Syphilitic headaches are often of a most persistent and chronic character, and may have existed for a very long time before their true character is suspected. This headache may be due to a variety of causes—periostitis of the cranium, meningitis, or intracranial gummata. All give rise to headaches, sometimes of a dull and sometimes of a very acute character, but most syphilitic headaches are worst at night, and this should always rouse our suspicion as to their true character. I have seen many cases of headache where the patients were sent to me with the idea that eye-strain was the cause, but where the distinctly nocturnal character of the headache directed my attention to the real cause, as was subsequently proved by their rapid disappearance under treatment. The physician is often misled by the absence of syphilitic history or syphilitic traces on the body of the patient. But syphilis is such a variable disease, that the experienced observer attaches no importance whatever to the absence of syphilitic history, and this even when he is quite certain that the patient is telling him the truth. The primary lesion and usual secondary symptoms may have been so slight and trifling as to have escaped altogether the notice of the patient, and yet he may suffer from later syphilitic manifestations in a most severe form. This cannot be too strongly insisted upon, that the absence of syphilitic history is of comparatively little moment in diagnosis. Should a patient suffer from chronic headache with distinctly nocturnal exacerbations, and for which no cause can be discovered, it is a very safe rule to put the patient on to a short course of specific treatment. My usual prescription is $\frac{1}{2}$ gr. hydrarg. perchlor. and 20 grs. pot. iodid., thrice daily. If the headache be of syphilitic origin, it will very soon be influenced by this treatment. I think there is nothing more striking than the rapid relief often given by this means to obstinate headaches, from which the patient has been suffering for a long time without their true character being suspected.

In order to perform its functions properly and without discomfort, the brain must not only be supplied with pure blood, but it must be sufficient in quantity as well as in quality. The brain has a very large vascular supply, and it has been estimated that it receives fully one-fifth of the blood in the human body, a fact which vividly bears witness to its immense and never-ceasing activity. If its functions are to be

properly carried on, it is absolutely essential that it should be freely supplied with blood of proper quality.

Hence, in the various forms of anæmia, where the blood supply to the brain is defective both in quantity and quality, headache, generally frontal or vertical, is a very frequent symptom. These anæmic headaches are often relieved by the recumbent posture, which ensures a more abundant blood-supply to the brain. Remedies such as phenacetin and antipyrin may give temporary relief, but cure of the headache will only be produced by the cure of the anæmia, and sending a sufficient stream of rich blood to the brain. This anæmic headache occurs both in the ordinary form of anæmia, in which there is chiefly a deficiency of hæmoglobin (as in chlorosis), and also in cases where the anæmia is due to loss of blood. The pain is generally frontal or general, and in chlorosis it is often complained of as being peculiarly intense at the back of the eyes, and the patient often describes the sensation as if the eyes were being dragged back into the head. I have frequently had patients consulting me with the firm belief that this pain was due to eye-strain, and it was very difficult to convince them that it was due to the impoverished condition of the blood.

The opposite condition of the vessels of the brain, viz., congestion, also produces headache, and the congestion may be either active or passive. We do not know exactly how vascular dilatation causes pain, but it is perfectly certain that pain already existing is increased by even trifling mechanical congestion. Dilatation of the cerebral vessels must cause a rise in the intracranial pressure, and we know that increase in intracranial pressure generally causes pain. Whilst the anæmic headache is often relieved by the recumbent posture, the congestive headache is always increased by stooping.

The congestive headache is generally accompanied by a sense of pulsation in the ears, and a flushed face and giddiness on stooping. The congestion of the cerebral vessels may be the result of a great variety of causes.

Active congestion may be caused by hypertrophy of the left ventricle of the head, by general plethora, by menstrual irregularities, by emotional or mental excitement, and other conditions.

Passive congestion may be produced by dyspnoea, by asthma, by valvular disease of the heart, and by disordered action of the liver or bowels. Congestive headache is often produced by mechanical hindrance to the return of blood

from the head. A tight collar, or resting with the neck so bent as to compress the veins, frequently causes headache of this character. The repeated mechanical congestion produced by cough is another frequent cause, and may even cause the patient more pain than the cough itself.

The treatment of these congestive headaches will depend upon the cause, and the headache will be cured only when the cause is removed. Purgatives are of the very greatest value in all cases of congestive headache. The regular administration of some mild but efficient purgative always gives some relief in these cases. The diet should be light, and alcohol must be cut off. When there is much mental excitement, or where the congestion is the result of excessive mental activity, great benefit is often derived from the administration of a good dose of bromide of potassium before bedtime and a good saline draught in the morning, but each case must be treated on its own merits.

But we must never forget that chronic headache may be a symptom of organic disease of the brain or of its membranes. We are apt to forget this. Headache is such a common symptom, and its causes are so numerous and often so trifling, that we are apt to forget that it may be a symptom, and sometimes the first and most prominent symptom, of organic disease of the brain or its membranes. This fact was very strongly impressed upon me by a case I saw a good many years ago. I was called in to see a young lady, about 18 years of age, in a comatose condition, in order to see if ophthalmoscopic examination would throw any light upon the cause of the coma. The history was that for more than a year before she had suffered from persistent headache. As she was busy with her education, it was thought at first that this headache was due to eye-strain. This idea was confirmed, when it was found that she had astigmatism. Cylindrical glasses were prescribed, but did not give her the slightest relief. She was examined by several ophthalmologists and physicians, but organic disease of the brain did not seem to be suspected. A few days before I saw her she was seized with gradually increasing drowsiness, which had rapidly deepened into coma. She died a few days after I saw her, and on *post-mortem* examination there was found evidence of chronic hydrocephalus, with excess of fluid in the ventricles and flattening of the convolutions. Since then I have seen, both at the Eye Infirmary and in my private practice, many cases of headache thought to be due to eye-strain, but on careful examination found to be due to disease of the brain or its membranes,

the misleading point about them being that in some of them there was a history that the pain was intensified by near work or by the use of the eyes. It very rarely happens that organic disease needs to be inferred from pain alone. If organic disease be suspected, the case should be very carefully examined for the presence of other symptoms, and such will usually be found. Cerebral tumours, cerebral abscess, cerebral softening, and meningitis are all frequently accompanied by pain, although pain is often wanting in these disorders. As a rule, the pain of organic disease is fixed and habitual, though sometimes it may be of an intermittent character. The locality of the pain, when present, by no means corresponds with that of the lesion.

If there be occasional sickness, it should increase our suspicions of organic disease, more especially if the sickness occurs without any apparent gastric disorder.

I have often been led to the true diagnosis in these cases by the ophthalmoscopic examination. The recognition of optic neuritis, or of intense hyperæmia of the discs, with venous distension, suggests at once intracranial disease as the cause of the headache, though it must be borne in mind that headache, with optic neuritis and even with vomiting, is not absolutely conclusive of intracranial disease, as all these symptoms may be met with in Bright's disease; so that before coming to a conclusion the urine should be examined. I have seen a very large number of cases of meningitis in children and young people, in whom the persistent headache was the most striking symptom, and who were therefore sent to the Eye Infirmary, in the belief that eye-strain might be the cause of it. In many of these cases, my attention was directed to the real cause of the headache by the condition of the optic discs; but I would direct attention to the fact that the clinical thermometer is often of the greatest value in the diagnosis. A chronic headache, accompanied by a persistent elevation of temperature, is certainly not due to eye-strain, but more probably due to some intracranial condition, and, if a young person, probably meningitis. I have seen so many of these cases, that I am in the habit of taking the patient's temperature in all cases of chronic headache, and I would strongly advise the physician to make a routine practice of doing this. Meningitis is frequently a very chronic affection, and for a considerable time may manifest itself only by headache and slight elevation of temperature. The use of the clinical thermometer will, however, often rouse the suspicions of the physician as to the true character of the headache.

The treatment will, of course, depend upon the character of the intracranial disease, upon which the headache depends. One point, I think, is quite clear—the desirability of putting the patient upon a vigorous course of specific treatment in all doubtful cases, as the intracranial disease may be of specific origin, a syphilitic meningitis, or a gummatous mass in the brain. I am a very strong believer in the efficacy, in these cases, of large doses of the iodides, 20 to 30 grains thrice daily, combined with $\frac{1}{12}$ to $\frac{1}{16}$ gr. hydrarg. perchlor.

One of the most striking cases of syphilitic intracranial disease that I have ever met with, and its rapid cure by energetic treatment, came under my notice in the summer of 1889. On the first day of my summer clinique, a young man of 30 years of age was led into the Eye Infirmary. He was totally blind, and was suffering from a constant and excruciating headache. The headache had lasted for about three months, had never left him, and was always worst at night. It was most intense over the occipital region, where there was marked tenderness to pressure. So severe and persistent was the headache, that the patient said he had determined to destroy himself if he could not get relief, as his life was intolerable. The headache was always decidedly worst at night. His blindness was absolute, he not being able to distinguish between light and darkness, and it had come on gradually since his headache began. On examination, nothing abnormal could be detected in the eye. There was a history of syphilitic infection several years before. I therefore concluded that the headache and blindness were due to a gummatous mass exercising pressure on the perceptive centres in each cuneus, on the internal aspects of the occipital lobes. Since these centres are close to one another and facing one another, it is evident that a large mass could exercise pressure on both. Interference with one perceptive centre would produce homonymous hemianopsia, but if both were pressed upon, then both half fields would be obliterated, and he would have complete blindness, as in the case under consideration.

I at once put the patient upon $\frac{1}{12}$ gr. hydrarg. perchlor. and 30 grs. pot. iodid. three times a day, and with the most admirable results. Within a week the excruciating headache, from which he had suffered for months, was completely gone. The vision gradually improved, until within eight weeks he was back at his employment. The most dramatic part of the case was the appearance of the patient on the second last day of the summer session, but this time he was leading a patient who was blind, to see if we could do something for him also.

The gummatous mass had disappeared rapidly under treatment, and the pressure being removed from the perceptive centres, their blood supply became restored, and also their functional activity. There had been no destruction of cerebral tissue.

I have seen also, in cases of meningitis in children, very brilliant results from mercurial treatment, which I prefer in these cases to give by means of inunction. When this is not possible, I give the mercury in the form of grey powder. Probably in many of these cases we are dealing with meningitis due to congenital specific disease, but, even apart from this, I think the mercury has a favourable influence on the course of the disease.

We have thus reviewed the chief causes of chronic headache, and enough has been said to show the great importance of the physician being thoroughly familiar with all the possible causes of this distressing symptom. When such cases present themselves, it is not enough to content ourselves with the prescription of some analgesic, such as antipyrin, phenacetin, or antifebrin. These drugs often give great relief, and by varying them their influence may often be maintained for a considerable time. But, in the case of chronic headaches, such measures should only be regarded as temporary and palliative, and as adjuncts to the real treatment, which consists in the removal of the cause or causes on which the headache depends. It is well worth remembering also that whilst headache is often dependent upon a single cause, removal of which will give complete relief to the patient, there are many cases in which several factors contribute to produce the headache, and where complete relief will not be given until every factor has been discovered and dealt with. I have at the outset of this paper called attention to eye-strain as by far the most common cause of chronic headache, sometimes as the sole cause, and sometimes as one of several contributing factors. In the remainder of the paper I have reviewed briefly the chief causes of chronic headache other than eye-strain, and have thus attempted to take a broad view of the subject. It is very necessary for us all to cultivate this wide outlook when we are dealing with a symptom of such varied causality as headache, and the wider the outlook, the less the tendency to error.

I have stated that at least 50 per cent of cases of chronic headache are due to eye-strain, and therefore are successfully dealt with by the prescription of suitable glasses. But there is a large number of cases of more complex origin, where the eye-strain is only one out of many contributing

factors. Complete success in these cases will only be attained when each contributing factor has been discovered and dealt with, a process which will demand patience, knowledge, and labour on the part of the physician. The purpose of the present article has been to try to give some help to the practitioner towards the solution of those problems, often very complex, with which he is confronted in the familiar but often perplexing cases of chronic headache.

HIGH-FREQUENCY CURRENTS IN MEDICAL PRACTICE.

By W. F. SOMERVILLE, M.D., F.F.P.S.G.,
Member of the British Electro-Therapeutic Society.

THE position of electrical currents of high-frequency as a therapeutic agent is not yet susceptible of exact definition. For this there are several reasons. In the first place, this form of treatment demands a specialised and somewhat expensive apparatus, and therefore the number of those who have the opportunity of making systematic observations of its actions and effects is limited. Secondly, the practice is of recent introduction and has not yet escaped the bias of undue enthusiasm on the one side or of prejudiced incredulity on the other. Again, it must be allowed that the use of these currents in the treatment of disease cannot at present claim a rational and scientific explanation. What the exact nature of the influence they exert upon normal and morbid processes in the tissues of the body may be is a question open to speculation, but it cannot be either defined or demonstrated. In the presence of these facts it is not surprising to find that much uncertainty exists in reference both to the value of high-frequency currents and to the forms of disease in which they are alleged to have proved of service.

To endeavour to meet this uncertainty I propose to relate the result of my experience in the use of these currents during the last twelve months, and, in doing so, I shall chronicle failures not less than successes. This, it is obvious, is the only way in which materials may be accumulated for an accurate estimate of the curative value of this, or indeed of any form of treatment. The facts displayed in the table which accompanies this paper may possibly be of service in assisting

the judgment of others, and also as a contribution to the attempt to define the class of cases in which high-frequency currents may reasonably be tried. In the present position of affairs empirical observations are our only available resource. Such observations, however, if sufficiently numerous and made with care, may provide a sound basis for practice, and it is of some importance that both in their positive and negative aspects they should be brought to the notice of the profession. For in one direction they demonstrate the value of high-frequency currents in the relief of many conditions which are notoriously difficult to cure by more traditional methods; and, on the other hand, they suggest that there are other conditions in which benefit from the use of the high-frequency currents can hardly be expected. It is probable that more precision is to be desired in each of these propositions. That a method of treatment sometimes succeeds and sometimes fails when applied to cases which are marked with the same diagnostic label, can only mean that our present scheme of diagnosis fails to recognise differences which undoubtedly exist. Similarly, a negative result in a few cases does not conclusively prove that other cases of the same disease, but at a different stage or degree of development, are also beyond the reach of relief. Hence, before definite propositions can be stated, further experience is necessary. I present my own experience in order that, when added to other published results, it may help towards the formation of a correct judgment as to the exact therapeutic value of high-frequency currents. From what has already been said it will be anticipated that I am hardly prepared to advance any very definite generalisation on this point. That in certain conditions the high-frequency currents exert a marked curative influence I have no doubt, but these conditions apparently differ much in their nature, and thus it is difficult to include them in any general proposition. The facts, however, remain, and they certainly afford ground for encouragement.

Speaking in general terms, it may be said that the records, as tabulated, give little reason for belief that high-frequency currents exercise any influence on definite anatomical lesions of the central nervous system. Thus, so far, I have altogether failed in cases of organic hemiplegia and paraplegia, and in locomotor ataxia. The cases are few, but the result is in accordance with what we know of the pathology of these conditions. It may be that individual symptoms may be relieved, but there is nothing to justify the expectation that

the essential facts in such cases can be modified by the use of high-frequency currents.

Peripheral neuritis affords a more hopeful experience. Of five cases treated, two were completely cured, and two were greatly improved. Functional nervous diseases show a still more gratifying record. Indeed, these conditions are almost invariably completely cured, and that, too, readily and promptly. Particular attention in this respect may be drawn to the value of the currents in insomnia, recurrent headaches, and various forms of neuralgia. In all these conditions the high-frequency currents seldom fail to secure certain and speedy relief. It is noteworthy also that the benefit in these cases, after a regulated course of treatment, is almost invariably permanent. This I have repeatedly been able to verify by the courtesy of the family medical attendant.

An almost equally confident statement may be made in reference to nervous disturbances of a somewhat more definite order—such, for example, as sciatica, chorea, incontinence of urine, asthma, functional motor spasms, and writer's cramp. In all these diseases the results have been highly satisfactory. Indeed, it must be regarded as certain that the high-frequency currents exercise both a regulating and a tonic influence on the functions of the nervous system, as patients who have been subjected to them in a series of applications are without exception conscious of improved mental and physical capacity, and of a greater sense of general well-being. The same influence is probably manifested in the relief of "rheumatic pains" in the joints or muscles, though in rheumatoid arthritis the currents, in my experience, have proved of little value.

A second group of cases in which good results can be reported, is that of local or general vascular disturbances. In these, it may be presumed, the currents prove useful by influencing the vasomotor mechanism. Hæmorrhoids, in particular, respond to treatment in a manner truly astonishing. Of eleven cases, only one failed to get benefit, and of the others, eight were completely cured. These results are all the more satisfactory when it is remembered that they are secured with a minimum of inconvenience and with absolutely no pain to the patient. Similar, but less complete results were obtained in cases of varicocele and in varix of the lower limbs. Much the same applies to patients who are suffering from weak circulation as manifested by coldness of the extremities, a tendency to chilblains, &c. It is probable that a parallel explanation applies to the relief of mucous colitis by

the use of high-frequency currents. Several of my cases of these diseases have been of many years' standing, and the beneficial influence of the treatment has been most decided.

ONE YEAR'S RECORD OF CASES.

	Cured.	Greatly Relieved.	Unrelieved.
Paraplegia, ...	...	...	1
Hemiplegia, ...	...	...	1
Locomotor ataxia, ...	...	...	1
Peripheral neuritis, ...	2	2	1
Insomnia, ...	10	2	...
Headaches, ...	13	...	...
Neuralgias (general), ...	12	3	...
Sciatica, ...	6	2	...
Chorea, ...	2	2	...
Incontinence of urine, ...	1	1	...
Asthma, ...	1	2	...
Spasmodic contraction of abdominal muscles with intense pain, ...	1	...	...
Spasmodic voiding of feces, ...	...	...	1
Writer's cramp, ...	...	3	...
Rheumatic pains, ...	4	3	...
Chronic rheumatoid arthritis, ...	...	...	3
Hæmorrhoids, ...	8	2	1
Prolapse of rectum, ...	...	...	1
Fissure of anus, ...	1	...	...
Varicocele, ...	...	1	...
Varicose veins of the leg, ...	...	3	...
Coldness of the extremities, ...	2	6	1
Chilblains, ...	1	...	...
Mucous colitis, ...	3	1	...
Psoriasis, ...	2	...	...
Rodent ulcer, ...	...	1	...
Eczema, ...	2	...	...
Acne, ...	2	...	...
Lupus erythematosus, ...	...	2	...
Prurigo (general), ...	1	...	...
Phthisis pulmonalis, ...	...	2	...
Strumous glands, ...	...	1	...
Myxœdema, ...	...	...	1
Fibroid of uterus, ...	...	2	...
Mastitis, ...	1	...	...
Palpitation, ...	...	3	...
Diabetes insipidus, ...	1	...	...
Exophthalmic goitre, ...	...	...	1
Deficient mental or physical energy, ...	...	31	...

In a third group may be placed diseases of the skin. The cases treated, as will be seen from the table, are not numerous, but they include several different forms of disease, and the results generally are good. One of the cases of psoriasis

was a very severe one and had long resisted treatment, but the patient rapidly improved under the high-frequency currents.

Regarding the other cases treated, the number under each heading is too small to form a basis for any dogmatic statements. For the present, I merely present the facts for what they are worth. I may, however, say that in two cases of phthisis pulmonalis there was good reason to believe that the high-frequency currents were certainly helpful. This accords with the experience of Chisholm Williams, whose published results are very striking.

Looking at the tabulated results as a whole, there can be no doubt that in the high-frequency currents we have a method of treatment of distinct value. Their power of service is especially marked in functional nervous disturbances and in localised vascular dilatations and other abnormal conditions of the circulatory apparatus, but their influence over diseases of the skin, as also a general experience of the results of their application, suggests that they are capable of profoundly modifying the general metabolic processes of the tissues, and that they will in time be found to have a wide range of application in the treatment of diseased conditions.

In the meantime the facts set forth in the accompanying table may afford some guidance as to the circumstances in which they may be applied with confidence, and may at the same time suggest lines along which it is desirable that further observation should be multiplied.

It may be convenient to add that the installation which I employ is that of Mr. A. E. Dean, Hatton Garden, London, E.C., and includes his special "condenser couch" and various instruments necessary for the local application of the currents to the several parts of the body.

POISONING PRODUCED BY THIRTY GRAINS OF SALICYLATE OF SODIUM.

By H. E. JONES, M.B., C.M.

I WAS recently asked to see Mrs. R., who complained of pains across the lumbar region and down the right leg as far as the ankle, of some days' duration. In consequence of their increasing severity, she had been compelled to take to bed a

few hours before my visit. The appetite was said to be poor, and I afterwards learned that she had been menstruating for two days.

The diagnosis made was lumbago with sciatica. The treatment consisted of an external application of chloroform liniment, and the internal administration of 30 grain doses of salicylate of sodium in a tumbler of water.

In about three hours after my first visit I again received an urgent summons. I found that within a comparatively short time after taking the first powder and applying the liniment she spoke favourably of her feelings, and remarked that she "felt quite strong, and had only a slight sensation of pain." Shortly afterwards she complained of a feeling of swelling in the abdomen, which quickly became distended, producing much discomfort and oppression. She had also a considerable amount of pain in the abdomen and back; a singing noise in the head, as if it would burst; and a hissing noise in the ears, like the blowing off of steam. Then followed an outburst of great excitement, the patient expressing herself in exaggerated and strong language, and becoming very violent.

When I saw the patient in about an hour after this outburst, she complained of a great load or weight about her heart, "as if dragging," and a sensation of sickness. She had a general feeling of prostration, and expressed the belief that she was dying. She was absolutely free from pain, but complained of thirst and of a ringing noise in the head. The heart was regular; the pulse full and bounding, 100 per minute; respirations free and regular; temperature normal; the tongue white.

Previous to my arrival the patient had passed a great quantity of wind, and had also evacuated much urine. During the hour that I remained beside her she was rather restless, tossing her head from side to side, and throwing her arms about. She remained in this state for about four hours, and then dropped over to sleep. When I saw her the following day she was in her usual health, and complained only of the pain in her back and leg.

The question arising in my mind is this—Were these symptoms purely those of salicylism, or was it a case of salicylism with hysteria? If it were salicylism, then a single dose of 30 grains, well diluted, produced it, as the patient had not had any medicine previously. This dose, though comparatively large, is by no means so large as I have frequently prescribed, without bad effect.

If the question of hysteria be taken into account—and in

this patient I rather suspect something of the kind—one would require to prescribe cautiously in such cases. Moreover, the menses were present at the time, and this circumstance suggests that it might be well to make inquiries about this function before prescribing in such cases.

A sample of the salicylate of sodium prescribed was submitted for analysis to Professor Stockman, who kindly interested himself in the matter. On his authority I am in a position to state that the medicine used was perfectly pure.

CURRENT TOPICS.

GLASGOW UNIVERSITY : MEDICAL EXAMINERSHIPS.—The University Court have appointed the following gentlemen to be additional Examiners:—In Anatomy, Professor Alex. Macphail, of St. Mungo's College; in Medical Jurisprudence, Mr. John C. McVail, Glasgow; in Midwifery, Mr. William Duncan, London; in Botany, Mr. J. Bretland Farmer, of the Royal College of Science, South Kensington.

PREVENTION OF CONSUMPTION.—Under the auspices of the Glasgow Branch of the National Association for the Prevention of Consumption, Dr. Alfred Hillier, Secretary of the National Association, addressed a meeting in the City Hall on Friday, 27th November, 1903. Professor Henry E. Clark, President of the Faculty of Physicians and Surgeons, occupied the chair, and there was a large attendance of representatives of friendly societies. Dr. Hillier's subject was "The Advantage of Sanatorium Treatment to Benefit and Friendly Societies," and he urged these societies to subscribe to sanatoria, so that they should have a right to a certain number of beds in them for their consumptive members; or, still better, to erect sanatoria for themselves, with or without the aid of subscriptions from employers and philanthropists. A vote of thanks to the lecturer was proposed in very eloquent and inspiring language by Bailie W. F. Anderson.

THE ROYAL ARMY MEDICAL CORPS' (VOLS.) (GLASGOW COMPANIES) ANNUAL, No. 3, DECEMBER, 1903.—The annual gathering and presentation of prizes of the Glasgow Companies

R.A.M.C. (Vols.) took place on 11th December, 1903, in the Empire Theatre, the whole of the building having been reserved for the purpose on that evening. An elaborate and most attractive programme was submitted to the company. Towards the middle of the evening, the prizes were presented by Colonel F. W. Trevor, P.M.O., Scottish District. The Long Service Medal was presented to Private M'Michan.

The present number of the *Annual* contains a large amount of interesting reading, and the difficulty one meets with after taking it up in odd moments is to put it aside when the odd moments are at an end, and when other duties call. The number is adorned with an abundance of excellent illustrations; and to sum up, we would recommend every one of our readers to procure a copy of it, and to read it for himself.

NEW PREPARATIONS, &c.

VALENTINE'S MEAT-JUICE, of which we have received samples, is now so well known to the medical profession as scarcely to require more than mention. The familiar two-ounce oval bottle contains the concentrated juice of four pounds of beef, or the condensed essence of a pint and a half of liquid juice obtained from beef. The meat-juice may be taken with cold water, or iced, or slightly warmed. It may be taken as an addition to cod-liver oil, and it has been used hypodermically. The dose is from a half to two teaspoonfuls, diluted with about eight times the volume of water.

MEETINGS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1903-1904.

MEETING I.—12TH OCTOBER, 1903.

The President, MR. A. E. MAYLARD, in the Chair.

I.—CYST OF RIGHT KIDNEY: BICORNUATE UTERUS (UTERUS SUBSEPTUS UNICOLLIS).

BY DR. J. K. KELLY.

These specimens are from the case of A. G., æt. 33, admitted on 5th September, complaining of prolapse of the uterus and abdominal swelling.

Patient had a child at the seventh month, seven years before, and since then suffered from falling-down of the womb. When young, she had discharge from both elbow-joints, continuing for a long time. Her menses were regular till she was 19 years of age. At that time they became somewhat irregular, coming on at intervals, usually of six weeks. About six years ago, one year after the birth of her child, she noticed her abdomen swelling. She does not know on what side it appeared first. It has varied in size from time to time. There was sometimes a pain on the left side under the costal arch, but apart from that she had no pain. For the past year she has menstruated at intervals of three weeks, and there has occasionally been very copious discharge.

Patient was a badly-nourished woman—square, low forehead, with sunken nose; left eye with recent injury; scars on both elbows and left knee; brown spots over chest; horizontal nystagmus; speech slow, hesitating, and jerky; marked hoarseness, but no ulceration of palate or fauces.

Breasts contain no secretion. Heart sounds normal. Front of chest hyper-resonant; respiratory murmur rough at right apex; expiration prolonged. Urine presents traces of albumen, but no tube-casts.

Abdomen is large, projected forward, elastic, and fluctuant to palpation all over; clear to percussion over left side, and

dull over the right from about an inch to right of the umbilicus. At the posterior extremity of the right labium majus, about an inch from the mucous membrane, is a little patch of exuberant granulations surrounding a fistulous opening, which communicates with the lower end of the vagina. The vaginal wall is thick and crowded into folds. Portio vaginalis is about normal level. The lower zone of the abdominal tumour lies over the brim of the pelvis.

The conclusion I came to with regard to this tumour was that it was either an encysted peritoneal collection or a parovarian cyst. The history and the general condition of the patient, as well as the unsymmetrical position of the tumour, rather indicated the former, while the flaccid character of the cyst pointed to the latter. The prolapse of the uterus would go equally with either. We did not entertain the idea of its being a renal condition, although its situation exactly corresponded with that of a large hydronephrosis, and if we had laid more stress on the statement of the patient as to the variations in size of the tumour, we should certainly have regarded renal cyst as an alternative diagnosis.

At the operation the cyst was found covered with peritoneum exactly resembling a parovarian cyst, but, as it emptied, it became evident that it was formed by the right kidney. Portions of renal tissue were found here and there in its wall. It lay behind the outer division of the right colic mesentery, the colon itself being thrown over to the left side. It was enucleated and removed after ligaturing the pedicle of the kidney. The hand was passed over to the other kidney, which seemed slightly large, but otherwise normal. The uterus was then sutured to the lower end of the abdominal wound, and the fistula at the vulva laid open.

The patient suffered from shock, and the pulse became very rapid, counting 160 about twelve hours after the operation. What were considered uræmic symptoms developed—tremors, twitchings of the face, increased slowness of speech, and mental confusion—but there was no suppression of urine, the smallest amount passed in twenty-four hours being 32 oz. on the third day after the operation. She became troubled with a cough and liquid râles developed, especially at the pulmonary bases. The temperature reached 101.4° on the first day, 101.6° on the second, 102.6° on the third, 103.8° on the fourth, 104° on the fifth, 101.4° on the sixth, 102.6° on the seventh, 103.6° on the eighth, and ran up to 106.6° before she died on the ninth day after the operation.

At the *post-mortem* both lungs were congested at the bases.

No areas of consolidation were found. The heart was anæmic, without valvular disease; left ventricular wall somewhat thin, but without fatty degeneration. Wound healthy. Some oozing of blood had taken place in bed of tumour. Left renal pelvis was dilated to size of a walnut; ureter also dilated from bladder upwards. No constriction or obstruction was found. There was considerable atrophy of renal tissue. The remains of the right ureter was dilated, dilatation beginning at same level as on left side. The uterus was found to be divided into two cavities, the division between them beginning about midway between os and fundus. Liver and spleen presented nothing abnormal.

Description of specimen.—Specimen shows a large cyst of the right kidney, somewhat larger than a football, and containing greenish-coloured fluid, about 5 pints in quantity. The walls of the tumour are smooth and glistening, being covered by peritoneum and the dilated kidney capsule. This is easily removed from specimen, and shows the thicker walls of the cyst. These walls are irregular in thickness, glistening, and vascular. Along one side is the remains of renal tissue, extending about 10 inches in length and 3 inches in breadth. From here the thickened vessels spring, and here was the separation from surrounding tissues. At upper portion of tumour is a small calcareous piece of tissue. About 5 inches from area of renal tissue is the ureter, much thickened, except at exit of kidney. No occlusion of its lumen is found."

The origin of the renal cyst in this case must, I think, remain doubtful. The dilated condition of both ureters in their lower portion is found frequently as a result of uterine prolapse, but the cyst has evidently no connection with the dilatation of the ureters. Still, the history seems to indicate that both the swelling and the prolapse originated about the same time. I think, however, that we cannot lay much stress on the history on account of the low moral and intellectual condition of the patient. Instead of the prolapse leading to the development of the cyst, it is more probable that the cyst led to the prolapse. There was no obstruction of the ureter. The only calculous deposit in the cyst was in the interior, high up under the liver, and was not near the ureter. In the distended state in which the kidney was found, the lumen of the ureter, at its exit from the cyst, would naturally be closed by the pressure of the fluid contents, but this pressure would only act after the cyst had developed.

II.—THREE CASES OF UTERINE MYOMATA.

By DR. J. K. KELLY.

CASE I.—I have three specimens of uterine myoma from cases which were all in the ward at the same time this summer, and were all operated on within a month of each other.

The first is from a patient, E. D., 49 years old, who had suffered seven or eight years before from difficulty of micturition, which led to examination and the discovery of an abdominal tumour. At that time she had pain in the back, the menses were at intervals of eighteen to twenty days, profuse, and accompanied with severe pain. This condition lasted till about a year ago, when the discharge became less in quantity and the intervals longer. About Christmas of last year she missed three months, but since then she has menstruated profusely at intervals of four to six weeks. For some years after she observed the tumour it gradually increased in size, then seemed to remain stationary for about two years. About a year ago it began again, and has grown distinctly larger, and the abdomen, especially in the upper part, has been tender to touch. Within the last three weeks there has been a great deal of pain over the abdomen generally. There has been some incontinence of urine for the past five months, and patient has become much thinner during the past year. She has pain in defæcation, and stools lately have been very dark in colour. Patient was seen by Dr. Kelly five years ago, and had then a myoma reaching to the umbilicus, but no other swelling in the abdomen.

When admitted to the ward on 22nd May the condition was found to be as follows:—Patient anxious and distressed looking, but not anæmic; breasts flaccid; pulmonary and cardiac conditions normal; urine normal; the abdomen is greatly distended, but not tense; superficial veins are marked. On inspection the wall is distinctly projected forwards in three places. The largest projection is above the pubis. There is another in the region of the umbilicus, and another in the left flank. On palpation, distinct tumour masses are felt, the whole hypogastrium being occupied by a firm, rounded, smooth, and somewhat movable mass, painless to pressure. Above this, and separated from it by a distinct groove, is a sensitive, irregular, and also slightly movable mass, presenting cystic characters, and extending upwards into epigastric and hepatic regions. The lower portion of this upper mass is

irregular, and presents a feeling as if it were the greatly thickened lower border of omentum; the upper part towards epigastrium and liver is more smooth and rounded. Percussion is absolutely dull over the lower tumour. There is a distinct zone of clear percussion between the upper and lower; and over the upper, while the clearness is lost to a great degree, percussion is not absolutely dull. On vaginal examination it is found that the tumour occupying the hypogastrium lies over the whole pelvic brim, and the cervix is carried far back into the pelvis.

*"Description of specimen: Fibro-cystic myoma of uterus.—*Specimen shows two distinct lobules, with several smaller tumours springing from the junction of these two. The lower and larger mass has incorporated within it the body of the uterus, amputation having taken place at the region of the internal os. Left tube and ovary are attached. The right was not removed. The lower tumour is smooth on its surface, and very vascular in some portions. There are several small areas of degeneration. The upper is smaller and somewhat triangular in shape. On right surface are attached the walls of a large cyst, which was evacuated before removing. This cyst has had for wall the peritoneal capsule covering the myoma. The upper tumour is smooth, but on left anterior surface it is more irregular, owing to the presence of several bands of fibrous tissue. These tumours are joined by a neck or constricted portion. On anterior surface of this are two small nodular growths, attached separately to the main mass by broad pedicles. The right is about the size of an orange, and is attached by some peritonitic adhesions to upper tumour. The left is the size of an egg. Both are nodulated and very vascular. On posterior surface of specimen is one large and two small nodules, attached at the constricted area. A large vein runs down the posterior surface of the specimen. The ovary is atrophied, and contains several small cysts. The tube is elongated, but not thickened. Some small cysts are seen at outer side of the broad ligament. Weight, $5\frac{1}{2}$ lb.; length, 11 inches; length of lower lobule, 7 inches; breadth of lower lobule, 5 inches; length of upper lobule, 4 inches; breadth of upper lobule, $4\frac{3}{4}$ inches."

In this case there was no doubt as to the existence of a myoma. The only question was as to the nature of the cystic condition in the upper part of the tumour. It was evidently increasing rapidly in size, and causing a great deal of suffering and depreciation in health. There was no trace of it when I

saw the patient five years before. It was probably either a cystic condition developing in connection with the myoma, or an ovarian cyst setting in independently. The peculiar distribution of the percussion note made the decision specially difficult, as it might either be due to a loop of bowel lying between an independent ovarian cyst and the original myoma, or, as it was found to be at the operation, due to a loop of bowel which had become adherent to the upper part of the original myoma before the cystic change in the upper part took place.

Hysterectomy was done on 27th May, and patient went home well on 15th June.

CASE II.—The second case is that of Mrs. M., æt. 41, admitted complaining of abdominal pain and swelling of about a year's duration. The pain was worst after menstruation, but it was nearly always present, though not so severe. It was worse when walking or working, but was present at times even when lying down. Soon after the pain began she thought her abdomen was swollen. The swelling was first noted on the right side. Menstruation was always accompanied by pain, and by vomiting and headache. It was regular till about six months ago, when the intervals became shorter (twenty to twenty-one days), and the quantity greater. There has also been pain in micturition, and some incontinence when walking or working. Patient had one child twelve years before. After labour she remained in bed ten days, but did not recover her strength for some time.

On admission the abdomen was found distended, the distension being specially marked on the right side about the level of the umbilicus. On palpation lobulated masses were found occupying the whole lower abdomen, passing on the left side to about midway between iliac crest and ribs, and on right side passing up quite to the hepatic region. Those masses are very firm, that on the right side being denser than the one on the left. With firm pressure the whole tumour can be moved laterally. There is no pain on palpation. On vaginal examination the cervix was found in ordinary situation; external os patent. The abdominal masses lay above the brim of the pelvis. The sound passed $4\frac{1}{2}$ inches into the mass on the left side.

In this case there was no difficulty in the diagnosis. Hysterectomy was done on 1st June, and patient went home on the 18th.

"Description of specimen.—Specimen shows a large tumour

growing from the right anterior wall of uterus, extending in an upward direction, and springing from about the origin of the internal os. The tumour is nodular, with an upper and lower portion united by a constricted area. The surface is smooth and glistening, and has numerous large vessels in its walls. Over whole, and more especially in upper part, are numerous fibrous bands, which are growing through the tissue, and thus forming irregularities of surface, having the appearance of an adeno-myoma. Near the constricted area are numerous small tumour lobules, with broad bases and rounded in outline. On upper surface of tumour is a congested area, to which was attached the bowel. This measures in length, $2\frac{1}{2}$ inches; breadth, $1\frac{1}{2}$ inches. The uterus is much enlarged, and lies over to the left of the specimen, the fundus being in a horizontal direction, and the anterior surface looking upwards. The surface is smooth, but on palpation two distinct tumour masses are felt in its substance. The appendages are attached to the uterus; the tubes are normal but elongated. The ovaries are slightly enlarged, and contain hæmorrhagic cysts. On posterior surface of specimen is seen the site of amputation of cervix. To right side, and on surface of upper part of tumour, are several small lobules, somewhat larger than those on anterior surface. Fibrous bands are also seen on upper part of posterior surface of specimen. Weight, $4\frac{1}{4}$ lb.; length, $8\frac{1}{4}$ inches; breadth at uterine level, $6\frac{1}{4}$ inches."

CASE III.—The third case is that of H. S., æt. 44, admitted 15th June, complaining of abdominal swelling and pain in moving about, of two years' duration. Her menstruation had always been painful, and accompanied by severe headache, sickness, and occasionally vomiting. The menses are still regular, but during the past three months the discharge has been more copious. She considered herself healthy till about two years ago, when she noticed the swelling. It was then in the right side, but has grown more towards the middle since. For the last six months she has had difficulty in retaining her urine, but no pain in micturition. The swelling causes her trouble when sitting down sewing, which she does all day, and also when walking.

On admission the abdomen was found distended, the distension being slightly more marked on the right side than on the left. On palpation it was found to be occupied by a very hard mass, extending up to the epigastrium and arch of the ribs, and passing round into the right flank. It could be moved from side to side without pain, and presented the same

hard consistence all over its surface, which was slightly irregular. The vaginal examination simply showed the intimate connection of the uterus and tumour with each other.

Hysterectomy was done on 22nd June, and patient left hospital on 23rd July, her stay having been prolonged by some suppuration round the sutures in the abdominal wound.

"Description of specimen: Myoma of uterus.—Specimen shows a large rounded tumour, with smooth glistening surface, growing from the fundus of the uterus, and incorporating it within its substance. Amputation has taken place through the lower part of the cervix. The opening into interior of uterus is seen—a sound passing 2 inches. The surface of the tumour is smooth, vascular, and does not show the presence of adhesions. On anterior surface and on left is a small nodule, about the size of a pigeon's egg, movable under capsule of larger tumour. Left tube and ovary are attached to specimen. Right was removed separately. Both ovaries are cystic and somewhat enlarged. Weight, $7\frac{1}{2}$ lb.; length, 7 inches; breadth, $7\frac{1}{2}$ inches."

The cases were briefly discussed by *Dr. W. L. Reid*.

III.—A LARGE DIFFUSE VENOUS NÆVUS.

SHOWN BY DR. A. N. M'GREGOR.

This case of subcutaneous venous nævus is interesting on account of its size, and the occurrence on its surface of small capillary nævi.

The patient, a girl of 15 years, was admitted to the Glasgow Royal Infirmary in August of this year. Her complaint was of swelling and pain in front of the left thigh. She is one of a family of seven, none of whom shows nævi, and her mother states that neither her relatives nor those of her husband are known to have birthmarks.

The capillary nævi have been present since birth, and they have not increased in number nor in size, so far as can be ascertained. The swelling of the thigh became apparent when she was about 9 years of age, and has been gradually increasing since that time. At first the swelling was small, and is said to have been of a dark bluish colour. It was free of pain. With increase of size, however, some difficulty in walking was experienced. This symptom was most noticeable

in the evening, and latterly was associated with pain of a sharp jagging character. She sought treatment in hospital principally on account of the fact that the pain had become almost constant. At the time of her admission there was a large diffuent swelling of the left thigh, extending from the junction of the upper and middle thirds of the thigh in front, to the level of the upper border of the patella on the outside of the limb. It occupied the most of the outer side of the thigh in that area, and its inner margin corresponded with the line of the internal saphenous vein.

Though, generally, the consistence of the growth was soft, and, in those parts where the colour of the vein showed through the skin, fluctuant, there were two or three small areas of firmer consistence, tender to the touch, and sensibly warmer than the surrounding skin, suggestive of phlebitis. Many tortuous veins could be seen round the periphery of the growth. The tumour was somewhat prominent, standing out considerably from the level of the surrounding skin at its centre, and shading, with ill-defined margins, to the healthy tissues. This prominence of the growth almost disappeared on pressure, and slowly returned when the hand was removed. The tumour altered in shape with exercise and change of position, but no pulsation could be felt, nor could the presence of a bruit be detected. Scattered irregularly over the surface of the tumour were twelve small pigmented spots, coloured for the most part purple, slightly raised. They were somewhat firm in consistence, and their colour did not disappear on pressure.

On 12th August, the patient being under chloroform, six of the principal veins were ligatured. At the first dressing, a fortnight after the operation, though the wounds were quite aseptic, most of them had failed to heal by first intention, owing to the premature absorption of the catgut sutures. About a week later the wounds were quite healed, and shortly after that the patient was sent to a convalescent home.

She was re-admitted to the infirmary on 28th September, so that the treatment might be continued. Her present condition shows a great improvement. The tumour is very much less prominent, and apparently much diminished in area. Its consistence is generally much firmer than previously, and in parts even hard. There are still, however, a number of soft fluctuant patches, and a few tortuous veins are seen entering the tumour. The absence of pain and tenderness on pressure is very marked, and the patient is able to use the limb much more freely. The cicatrices of the operation wounds show

a tendency to enlarge, and some of them have even the appearance of a commencing false keloid.

Remarks.—The interesting features of this case are—the size of the venous nævus, the occurrence of small capillary nævi, resembling angiokeratomata, and the enlarging cicatrices of the operation wounds.

A vascular tumour like this, intimately connected with the skin and involving the greater part of the front of the thigh, presents some difficulties in the matter of treatment.

Excision was barred by the sacrifice of skin which a complete removal would have entailed. Intravenous injection of irritant, caustic, or astringent fluids seemed dangerous, and subcutaneous strangulation of the whole tumour was hardly possible.

The procedure adopted—that of ligaturing the principal veins at the periphery of the growth—seemed the safest; and though some writers have failed to find it effective, the result in this case has so far been very satisfactory.

The difference in size is clearly indicated, for the incisions were made at the periphery of the growth.

The prominence of the tumour is also much less than formerly. The vessels are less distinguishable, and the tumour is of firmer consistence. There is a marked difference in the variations in size from alterations of position, exertion, and pressure.

Formerly, the whole swelling, with the exception of one or two hard spots, could be emptied by compression, and now the distended portion is limited to a small area below and to the outer side of the centre of the affected area.

With such an improvement, as the result of ligaturing a few of the subcutaneous veins, it is hoped that a repetition of the treatment will be effective in occluding the whole tumour.

The small red and purple nævi situated in the skin over the tumour are peculiar in that they cannot be wholly emptied of blood and deprived of their colour by pressure.

In this respect they resemble angiokeratoma, as it is described by Pringle¹:—

“The initial lesions are tiny red or violet spots, at first discrete, afterwards becoming clustered into irregular groups, and forming small patches, distinctly raised, rough on the surface, hard, and sometimes covered with thickened epidermis, so as to resemble warts. They become paler on pressure,

¹ *Brit. Journ. Dermat.*, August, September, and October, 1901, quoted by Malcolm Morris, *Diseases of the Skin*, pp. 522 *et seq.*

but the blood cannot be completely forced out of them, a small bright red or black spot, clearly representing a capillary loop, always remains in the centre."

In the present case, however, the lesions are congenital. They are associated with another nævoid growth; they have not grown or coalesced, nor is there any roughening nor hardening of the epidermis. These spots are not apparently diminished with the shrinking of the main tumour, and are obviously distinct and separate growths.

The alteration of the scars takes the form of an enlargement, and a persistence of the pinkish colour; there is also a tendency to the formation of ridges, and their surfaces are glazed. Their appearance suggests false keloid, and may be due to some disturbance of innervation.

The *President* congratulated Dr. M'Gregor. The nævus appeared quite solidified. He hoped Dr. M'Gregor would show it again in five or six months.

IV.—NOTE ON A CASE OF LARGE CONGENITAL UMBILICAL HERNIA.

BY DR. JOHN PATRICK.

Baby M. was admitted to the Glasgow Royal Infirmary thirty hours after birth. I had seen the child at its own home, at Milton of Campsie, six hours after birth, and gave my opinion that it ought to be removed to a place where operation, if determined upon, could be done at once. But, unfortunately, a delay of twenty-four hours took place, owing to what were described as "weak turns," in which the baby became for the time deeply cyanosed, and the action of its heart "weak." The true nature of these attacks, of which there were two or three, is not known.

In that period of twenty-four hours also, there took place a slight tear of the covering of the hernia. This covering was exceedingly thin, consisting only of the external membrane of umbilical cord, and almost transparent, so that the coils of bowel could be seen in peristaltic action within the sac.

The child was a healthy large child, with no other deformity visible. Some vomiting had taken place, but not in excessive amount. The bowels had acted several times naturally, and some sips of sterilised cow's milk and water had been given from time to time.

When the baby was brought into the infirmary it was

thought advisable to operate at once, for these reasons—that there was a risk of the whole contents of the sac being extruded through its thin walls, that infection of the peritoneum had probably already taken place, and that the child was otherwise a strong and healthy child, likely to withstand an operation as well then as a few days later.

The operation was an attempt at a radical cure. At first efforts were made to return the bowel into the abdomen without opening the sac, but that was found impracticable. A slit was made in its upper side, and that continued through the true skin forming the umbilical ring. The whole of the intestines thus were exposed, and throughout the operation till the cavity was closed a constant stream of saline solution was run on them to maintain their temperature and to cleanse their surface. The reflection of peritoneum on the inner wall of the sac was only a thin shreddy membrane, extending about three-eighths of an inch outwards on the sac from the ring. It was peeled off from the sac and from the umbilical ring to form, if possible, the first of the three layers of the abdominal wound. The skin was then incised circularly, taking away a ring of true skin, a quarter of an inch broad, along with the whole sac, which forms the specimen. The gap in the abdominal wall now to be closed was nearly three inches in diameter. With some difficulty the intestines were returned to the abdominal cavity and kept there while the wall was stitched in three layers, the middle layers being united by mattress sutures of catgut.

The operation took forty-five minutes.

Naturally one could hardly look for recovery with any degree of confidence. This baby made a brave little struggle for forty-eight hours, and then succumbed. The temperature after the operation was 102°. That was maintained for eighteen hours, and then rose rapidly to 106°, death following about six hours later.

Post-mortem examination was not permitted, so that we surmised that death was due to the shock of the operation. There was no obstruction, and no peritonitis nor distension. The bowels acted several times, thirty-six hours after the operation, after a small dose of castor oil. There was no recurrence of the cyanosis, except for a short time while the child was under chloroform. The operation was stopped only for a few minutes.

The hernia measured $9\frac{1}{2}$ inches in greatest circumference, $4\frac{1}{2}$ inches in length from the surface of the abdomen to the apex, and the ring was $2\frac{1}{2}$ inches wide. Its general shape

was that of an expanded bishop's mitre, constricted below, then bulging, then tapering quickly to a point from which continued the umbilical cord. The umbilical vein and the two arteries can be readily seen near one another in the wall of the sac. These were all ligatured at the operation. The wall of the sac appears now thick and opaque as the result of the action of the formalin in which it is preserved.

V.—CLINICAL FEATURES OF A CASE WHICH PRESENTED *POST-MORTEM* A CHRONIC GASTRIC ULCER AND MILIARY TUBERCULOSIS.

BY DR. R. BARCLAY NESS.

The patient, the account of whose case I wish to bring under your notice, was admitted into the Western Infirmary on 4th September, 1903.

The interest of the case lies, first, in connection with certain points raised during the progress of the disease, pertaining chiefly to diagnosis; and, secondly, in the fact that the symptoms which presented difficulty received full explanation in the lesions revealed at the *post-mortem* examination conducted by Dr. Ferguson. He will demonstrate the condition of some of the organs, after I have given you a short account of the clinical history.

The patient, a man (M. H.), aged 41 years, was admitted to hospital complaining of great weakness and loss of flesh, accompanied by shortness of breath and palpitation on exertion, of three weeks' duration.

Enquiry, however, elicited the fact that at the end of July, 1903, patient had a severe attack of "indigestion," the chief symptoms being acute pain shortly after taking food, most of which he invariably vomited. This condition lasted for about two weeks, but though the patient felt very ill, he remained at work. During this time, and even after the pain had subsided, the patient said that he took very little food, and to this he ascribed the exhausted condition in which he was at the time of admission.

In view of the *post-mortem* examination revealing a chronic gastric ulcer, these symptoms are now easily explained; but at the time when the patient was seen first they did not—though they were by no means ignored—perhaps obtain the weight they deserved.

Our attention, on the other hand, was most attracted to the following statement:—He related how, though, at the same time, admitting an excessive indulgence in alcohol—a fact

fully attested by his relatives—he enjoyed good health up till seven years ago. At that time he was confined to bed for a month, and off work for three months, on account of an attack of acute pleurisy—a pleurisy with effusion—because he states that he was tapped, and that as much as a pint of fluid was withdrawn. Soon after resuming work, he suffered on two occasions from pleuritic pain, but, with this exception, he says that his progress towards recovery was uninterrupted. Since that time he had been very well, and able to attend to his work regularly; but he admitted having been frequently, and at times severely, troubled with a cough, accompanied by some yellowish expectoration. He had also perspired profusely on occasions, and more or less regularly for some time previous to admission.

I don't think this account by any means can be a complete history, but I am satisfied that it was as complete as it could be, in view of the man's habits and the condition in which he was when admitted.

The history certainly brings out two main facts—first, the occurrence of severe symptoms referable to the condition of the stomach, although the time at which they are noted to have occurred, viz., the end of July, could not possibly have been the earliest date of their first appearance. The second important fact was the occurrence of the acute pleurisy seven years ago. Most weight was attached to this latter part of the history, in view of the possibility of the pleurisy having been tubercular in character, though careful enquiry into the family history gave no support to this speculation.

When the patient was admitted he presented the appearance of one suffering from an acute febrile disease, attended with wasting. His face was sallow, thin, and pinched; his lips were dry and somewhat livid; his tongue red and parched; perspiration was frequent; breathing not distressed but rapid, numbering 25 to 30 per minute; while the pulse, which was soft and rapid, varied from 115 to 130. The temperature during the first few days after admission ranged chiefly between 101° and 102° F., though on one occasion during this time it was as low as 99·6° F., and once as high as 102·8° F.

Attention was chiefly directed in the physical examination towards the condition of the lungs. The only fact noted with regard to the symmetry of the thorax, was a slight degree of flattening under the left clavicle. The respiratory movements, though rapid, were quite free. The percussion note was much the same on the two sides, though, at the extreme left apex there was a slight degree of impairment.

Auscultation revealed the presence of moist râles all over both lungs, back and front, more or less variable in number and position, but perhaps more persistent at the left apex. One point on this side was particularly noted where they were more constant, namely, an inch below the clavicle in the nipple line. At the apices, too, especially the left, some slight degree of tubularity was detected.

In spite of this condition of the lungs there was very little cough indeed, and practically no expectoration and no hæmoptysis. An occasional sputum, when first admitted, afforded opportunity for examination for the tubercle bacillus, with negative results. Later on in the progress of the disease the expectoration was increased and purulent in character, but even then no evidence of the tubercle bacillus could be obtained.

Nothing was noted in the condition of the heart beyond a slight increase of cardiac dulness towards the left, and the rapid action.

No definite abdominal symptoms were noted beyond constipation and slight enlargement of the liver. The urine was free from blood or sugar; occasionally a trace of albumen was detected.

The view taken of the case at this time was that the patient was suffering from pulmonary tuberculosis, that the previous pleurisy had been of a tubercular nature, and that there was evidence of an old tubercular lesion at the left apex.

About three or four days after the admission of this patient to the ward, another man was admitted with all the typical symptoms of enteric fever of the third week. To confirm the diagnosis, a sample of blood was sent to Dr. R. M. Buchanan, city bacteriologist, to ascertain whether the Widal reaction was present. The opportunity at the same time was taken of sending a specimen of blood of the patient whose case is now under consideration.

I was somewhat surprised with the report that the Widal reaction was obtained in both cases (8th September). A second specimen of blood was sent (10th September). This gave also a positive result, the dilutions used and the times of agglutination being, in the latter test, 1 in 50 in three-quarters of an hour, 1 in 100 in one hour, and 1 in 500 in an hour and a half.

This led to another critical survey of the patient's condition, to determine whether he had actually enteric fever. The results of this examination may be briefly summarised as follows:—

No rose spots could be detected, though watched for over a period of several days. There was no abdominal distension, or pain or gurgling elicited on pressure in the right iliac region. The spleen, however, was enlarged, as judged by percussion and from being palpable. The liver was also, as stated above, slightly enlarged. There was no diarrhœa. The bowels were rather constipated, and required enemata to encourage movement. The motions were then found to be unusually dark, and showed sometimes the presence of a little red blood, and whenever the guaiac reaction was tried, the presence of blood was indicated. The urine presented the features indicated above, but the diazo reaction was now obtained, and though perhaps not in its most typical form, yet as distinctly as in the undoubted case of enteric fever with which it was compared.

The symptoms suggestive of the possibility of enteric fever were the length of the illness, the fever, the enlarged spleen, the hæmorrhage from the bowel, the diazo reaction of the urine, and the Widal reaction of the blood. But all these were possible in acute miliary tuberculosis, with the exception, perhaps, of intestinal hæmorrhage, which is unusual.

Those who saw the case—Dr. R. S. Thomson at this period, and Professor Stockman at a later period—quite agreed that the aspect of the person was not that of one suffering from enteric, and believed that the facts on the whole supported the diagnosis of miliary tuberculosis, particularly the condition of the lungs, the rapidity of the breathing, and the fact that the temperature was beginning to show some irregularity and greater oscillations during the day. Thus the following indicate the minimum and maximum temperatures, between the 10th and 13th September, inclusive :—

10th,	.	.	99·4° F.	101·4° F.
11th,	.	.	100·4° F.	102·4° F.
12th,	.	.	98·8° F.	102·8° F.
13th,	.	.	100° F.	102° F.

There was little change in the condition of the patient from this time till the 19th September. On the forenoon of that day he suddenly complained of faintness, and a feeling as if he were going to die. The pulse was extremely feeble. He quickly recovered, however, under the influence of a little sweet spirits of nitre. The temperature that night rose as usual, reaching 102° F.

About 5 A.M. on the 20th, the patient showed alarming signs of collapse, with lividity and perspiration, pulse being scarcely

perceptible, very soft, and numbering 160 per minute. Temperature fell from 102° F. in the preceding evening to 99° F. Respirations were 60 per minute. He rallied gradually under the influence of small doses of stimulants. The same evening the temperature was 100·4° F. The probability now is that this was due to hæmorrhage, but there was nothing in the motions beyond what had been noticed before to prove this, viz., the dark colour and traces of red blood.

On the 21st, the temperature again fell as low as 98·4° F.; but on the 22nd, it rose as high as 101·6° F.; and on the 23rd, to 102·6° F. Thereafter it continued high till death, which occurred on the 25th at mid-day, and which was preceded for some hours by the vomiting of blood from the stomach. The quantity at first amounted to about 4 fluid ounces, but thereafter it only occurred in small quantities at a time for an hour or two before death.

I will now leave Dr. Ferguson to demonstrate the *post-mortem* appearance of some of the organs, which have been preserved, pointing out that, while the case answers in most points to what is usually found in miliary tuberculosis, there have been found unusual conditions associated with it, viz., the chronic gastric ulcer, and a hæmorrhagic condition of the bowel, conditions which, in a great measure, explain some of the anomalous symptoms which presented themselves during life.

It would be of interest if something definite could be said in respect to the occurrence of the Widal in such cases. It is a point to which great weight is now given in the diagnosis of enteric fever, and that it should fail in such a case as this may prove very misleading.

With regard to the diazo reaction in the urine, much help was expected from it when first introduced. Now we know it can be obtained in a large number of conditions. So now, with the Widal reaction of the blood, we can only take it that a positive result makes the diagnosis of enteric probable, and the more probable in proportion to the shortness of the time within which the reaction may be obtained and the greatness of the dilution giving the result.

I have to acknowledge my indebtedness to Dr. Muir, house physician, who kept the record of the case.

Dr. A. R. Ferguson demonstrated the stomach and lungs from this case, and gave a summary of the pathological features.

"The stomach contained a chronic ulcer in the middle of

its greater curvature, the floor of which was formed by the pancreas. This organ was firmly adherent to the stomach in almost its whole extent. The ulcer was oval in form, and measured 1 inch by $1\frac{1}{2}$ inch. The appearances suggested that hæmorrhage had taken place from the ulcer at two points, the actual sources of the bleeding being, however, concealed by clot of recent character. Some free blood-clot was present in the stomach, as well as a large quantity of fluid blood of altered colour.

"The intestines contained a considerable quantity of altered blood, which had doubtless passed from the stomach.

"The wall of the lower part of the small intestine was infiltrated with blood of purple colour, and of comparatively recent appearance. The bowel, which was examined throughout, was free from ulceration of any kind.

"Close to the wall of the duodenum, and in rather close proximity to the area of ulceration in the stomach, an enlarged mesenteric gland was found. On section this was found to consist almost entirely of softened caseous material, which in places at the periphery of the gland resembled pus in consistence. In this material large numbers of tubercle bacilli were discovered. The remaining mesenteric glands were neither enlarged nor obviously tubercular.

"The *spleen*, *liver*, and *kidneys* contained numerous tubercles of small size. (It was noted that the tubercles in the kidneys were somewhat larger and more numerous than is usually the case in miliary tuberculosis.)

"Both lungs were the seat of miliary tuberculosis from apex to base. In the apex of the left lung there was a limited area of deeply pigmented fibroid tubercle, in which were scattered about half a dozen small calcareous and caseous nodules. There was no evidence of recent activity about this lesion.

"The bronchial glands were enlarged, œdematous, and contained small recent tubercles. They were free from appearances of older tuberculosis."

Dr. Ferguson suggested that the onset of miliary tuberculosis might be referred to the enlarged and softened mesenteric gland, in which very numerous tubercle bacilli had been found, and that perhaps the tubercular process in this situation had assumed a phase of greater recent activity in consequence of disturbances associated with the gastric ulcer.

With regard to the positive result given by the blood in this case during life when examined by Widal's method,

Dr. Ferguson said that the yielding of a positive result in such a comparatively high dilution as 1 in 500 in tuberculosis was a perplexing feature, which added greatly to the difficulty of diagnosis. In his experience of the method, such a result had not occurred. He added that blood taken from the femoral vein in this case *post-mortem* had been examined in dilution of 1 in 50, 1 in 100, and 1 in 500, by Widal's method with negative results.

VI.—NEW FORM OF HÆMOGLOBINOMETER.

By DR. J. M'GREGOR-ROBERTSON.

Dr. M'Gregor-Robertson demonstrated a new form of hæmoglobinometer by Dr. Dare, of Philadelphia, U.S.A. The principle of it is the comparison of a capillary film of blood with a standardised graduated glass plate. There is no dilution of the blood, which is transferred directly from the drop to the capillary chamber. The standard is a semicircle of tinted glass, which is revolved by means of a milled edge, within a circular case, in the circumference of which a little window permits the exposure of a small part of the glass. This is just alongside of the blood chamber, and a candle immediately behind illuminates both equally, the two circles of coloured light being viewed through a small telescopic eye-piece. The glass semicircle is revolved till its tint accords with that of the blood film, and by means of figures on the edge of the semicircle the percentage of hæmoglobin is read off directly. The simplicity of the apparatus, and the use of undiluted blood, permit of an estimation of hæmoglobin being made with great rapidity, a couple of minutes being sufficient. The candle illuminant, and the use of an eye-piece, enable the observations to be made, free of the disturbing element of varying degrees of illumination, and obviate at the same time the necessity of a dark chamber. The apparatus is very compact, and can be carried in a coat pocket. It is made by M'Queen & Coy., Incorporated, 1010 Chestnut Street, Philadelphia, and costs 20 dollars.

GLASGOW SOUTHERN MEDICAL SOCIETY.

THE Society met on 26th November—Dr. Thomas Richmond, President, in the chair.

DR. JOHN CARSWELL read an interesting, instructive, and suggestive paper on "Alcohol and Preventive Medicine."

Dr. Carswell began by referring to the diminution of the death-rate in Glasgow during the last thirty years, and pointed out the specific districts in the city in which this had taken place in varying degrees. This decrease in the death-rate had occurred in every district, with the exception of two, viz., Brownfield and Cowcaddens, which districts were not the worst thirty years ago. The three worst districts thirty years ago were Bridgegate and the Wynds, High Street and closes east of High Street, and High Street and closes west of that thoroughfare. He noted that these three districts had largely diminished in population during that period, and hence in density of the population per acre. Cowcaddens and Brownfield, on the other hand, had not diminished in population. Comparing the five districts already mentioned, Dr. Carswell pointed out that the character of the population had changed in all. The districts which showed a diminished death-rate had improved in this respect, while the districts which were stationary as regards death-rate showed no amelioration, but rather the opposite, in the character of the inhabitants. He pointed out the marked reduction in the death-rate which occurred in about ten years' time, following the reconstruction of the Bridgegate, and the clearing out of the "rookeries" in the closes west of the High Street.

Dr. Carswell declared that the saving of life from zymotic diseases was but a small part of the work to be done by proper sanitary control, and pointed to the figures in the death-rate of 1891 and 1900, which showed a reduction of 0·318 per 1,000 from infectious diseases, while the reduction in the death-rate from respiratory diseases had reached 2·372 per 1,000.

Referring to the sanitarily incorrigible districts of Glasgow, and instancing Brownfield, Cowcaddens, Gorbals, and Calton, Dr. Carswell noted that, although kept in check, they had shown no tendency to improvement, and he considered that there was some reason for this which required elucidation. He declared that there was some strange affinity which kept

the poor together; it might be the character and habits of the people, or it might be—but he doubted it—cheapness of living, which caused them to huddle together. As a matter of fact, that class of the population were, in reality, dumped into the worst districts, having to find lodgment somewhere, and having been ejected, on account of inability to pay rent or of disorderliness, from more decent localities. The problem Dr. Carswell wished to solve was how these people were to be raised from their degraded position. What is there, he asked, in Cowcaddens, for instance, that is not in better districts? He believed that the crux of the question lay in the one word—poverty. Dr. Carswell recognised two classes of poverty—(1) Primary poverty, in which there was absolute insufficiency of means to supply the needs of the people; and (2) secondary poverty, which was induced by misfortune, ignorance, drink, and vice.

Speaking more directly on the part alcohol played in the matter, Dr. Carswell was very optimistic. Acknowledging that drunkenness caused poverty, failure of nutrition, and serious disorganisation of the wellbeing of mind and character, he declared that he did not believe in the generally accepted theory, that the craving for alcohol was inherited, nor could he bring himself to believe that alcoholism in the mother could produce serious mischief in the unborn infant. He considered the nutritional defect in the child caused by alcoholism in the parents a very disheartening doctrine. He did not believe that vices were inherited by the offspring, and he pointed to the very beneficial effect of improved environment on the children of alcoholics.

Dr. Carswell declared his belief in the efficacy of proper care in childhood as a factor in checking the degeneracy of manhood. He did not believe that reduction in the death-rate favoured an increase in adolescent insanity, but he acknowledged that a starving childhood meant a decaying manhood from failure of physical stamina.

He advocated strongly an increased interest in the care of the child, and would favour the establishment of a "child-welfare society." Starvation in childhood meant brain rickets, and he pointed with satisfaction to the good effect of supplying children of the poor with food while attending school.

Dr. Carswell deplored the blank apathy in the lives of the poor, and hailed with delight the advent of any demagogue with power to awaken conscience in the matter of the poverty-stricken. He thought this was the secret by which we might

induce the poor to abandon drink, might rouse them out of themselves, and might give them fresh interests—their own interests.

Considerable discussion followed the reading of Dr. Carswell's paper, and was taken part in by *Drs. A. K. Chalmers, Miller, Macgilvray, and Forrest.*

Dr. Wallace was of the opinion that the improvement in the condition of the people was due not so much to sanitary science as to the spread of education and the increase of knowledge.

Dr. Carstairs Douglas declared that he failed to see how any amount of erudition could conduce to longevity when there was a cesspool under the floor of the living-room.

On the motion of *Dr. Richmond*, Dr. Carswell was thanked for his address.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1903-1904.

MEETING II.—21ST OCTOBER, 1903.

The President, DR. C. R. M'LEAN, *in the Chair.*

I.—CONVALESCENCE FROM HENOC'S DISEASE.

BY DR. JAMES DUNLOP.

This patient, a girl, *æt.* 9, has the following history:—

On 8th April, 1903, she felt cold and shivery, and this continued for three days.

11th.—Headache at 5 P.M., a sharp pain in the back, "up the spine," went to bed, became sick and vomited excessively, nose began to bleed.

12th.—Bowels moved by cascara, nose still bleeding, suffering from great pain in abdomen.

13th.—Dr. Borland saw her to-day. Patient still vomiting, has pain in stomach.

14th-15th.—Bowels moved by enemata—blood in motions. Symptoms indefinite.

17th.—Blood tested for enteric fever—negative Widal.

18th.—I saw her to-day early, on account of abdominal

pain. Constipation still, bowels moved with difficulty even by enmata; blood in fluid.

23rd-25th.—The question of intussusception raised. Epistaxis at times, vomiting ceased, bowels moved naturally.

26th-30th.—*In statu quo*, urine now contains blood.

On 12th May she was moved from kitchen to bedroom, and from this time till 23rd May she improved somewhat, and was allowed up, but felt her knees tired and very sore.

27th.—Patient allowed out in a car; knees again very sore at night.

28th.—This morning, on getting up, the soles of feet felt as if sleeping. Patient was out in the sunshine at back of house for two hours. Here her legs seemed to give way; she was carried in and put to bed. It was noticed that her legs were all out in red blotches, and swollen from the knees downwards. Temperature, 103° F. Joints painful and swollen. Hot fomentations were applied for three hours before pains were relieved in the legs. She was kept in bed for three days, and the pain, swelling, and red blotches disappeared.

31st.—Urine again contained blood with epithelial, granular, and blood-casts. Her blood was examined to-day by Dr. Borland, who reported:—Red corpuscles, 4,160,000; leucocytes, 10,075; hæmoglobin, 70 per cent; specific gravity, 1050; rate of coagulation, four minutes fifty seconds.

During the month of June she slowly improved.

The albumen and blood disappeared from the urine. By the end of the month she was allowed up, and in July she went to Eaglesham for a holiday, and returned home quite well.

Remarks by Dr. Dunlop.—The case was very puzzling for a long time, and until the appearance of the purpuric eruption on 28th May, no definite diagnosis could be made.

At first the symptoms were chiefly "gastro-intestinal," with epistaxis, vomiting, and abdominal pains. Enteric fever was thought of, and excluded by the negative Widal's reaction. Later on, obstinate constipation, blood in motions, and colicky abdominal pains raised the question of intussusception or some other form of intestinal obstruction.

She was very anæmic, and the urine, repeatedly examined at first, was normal. Latterly it became loaded with blood, and the case was regarded now as possibly acute Bright's disease, until the purpura showed up the true nature of the case.

In 1874 Henoch described a peculiar form of purpura, and

in his fourth edition of *Diseases of Children* (1889) he describes six cases—from 1868 to 1883.

These cases were characterised by abdominal pains, colic, vomiting, hæmorrhages, and purpuric spots—with rheumatoid pains—some of them also with acute nephritis (one of the latter was fatal).

The pathology of the disease is still very obscure. There was no evidence of want of coagulability of the blood. The colic and other pains may have been due to hæmorrhages into the mucous membrane, or to small multiple emboli in the intestinal walls.

The disease began like a fever, with cold shivering and a headache, as if some poison were in the blood; then hæmorrhages from nose, bowels, and kidneys, and later on into skin; evidently some acute disease of the blood or of the blood-vessels.

She was well when warm in bed, but chilling of the surface seemed to induce a recurrence of the pains and purpura.

Treatment.—At first towards stomach, vomiting and pain; then to overcome the constipation. Later on, the kidney condition was treated; and for the hæmorrhages, calcium chloride was given. Treatment was mainly expectant, and directed to any acute symptoms as they arose.

II:—PATIENT EXHIBITING GREAT DEFORMITY OF THE CHEST FOLLOWING SPONTANEOUS CURE OF EMPYEMA.

BY DR. JAMES DUNLOP.

This patient, a man, æt. 45, had an attack of pneumonia of right lung when 20 years old. Was back at work in ten days (as a grocer's assistant). When lifting a heavy bag a week later, he felt a sudden sharp pain in right side of chest, below shoulder blade, with great breathlessness. Had to go home, and in two hours' time pain had come through to front of chest, and was most severe just above right nipple.

Hot fomentations gave only partial relief, and the doctor ordered leeches. Seven were applied, and bleeding kept up for ten hours by bread poultices. This gave him relief, but left him very weak, and the doctor ordered wine to get up his strength before he would blister him.

After ten days, four fly blisters were applied at weekly intervals. (This was the sixth week of illness.)

For six months he had a course of medicine, and was painted with iodine. One day in getting into a high bed—as he sat down on the edge of it—something gave way, and he began

to cough and spit up mouthfuls of thick yellow matter (nearly a chamber full).

For the next nine months (fifteenth month of disease) he had bad cough and spit, with sharp pain in chest and down right arm (intercosto-humeral nerve). A lump appeared on front of chest (where pain was greatest), like a plum, became discoloured, and ultimately burst or discharged "an extraordinary amount of matter." It leaked excessively for two months, and did not cease for over two years (fourth year of illness). Cough and spit ceased at once when abscess broke.

For next twelve years he had fairly good health, though not strong, till 1895, when he had an attack of pleurisy on left side.

Present condition (18th October, 1903).—Right side of chest is collapsed, and shows very little movement on inspiration. Right side at nipple measures $12\frac{3}{4}$ inches, left side at nipple measures $16\frac{1}{4}$ inches. Large scar seen in second right interspace close to sternum. Percussion note impaired on right side, and a dull area extends from level of sixth rib to umbilicus = $5\frac{1}{2}$ inches in nipple line.

On left side percussion gives a clear note all over front. No cardiac dullness can be detected, and no apex beat seen in recumbent position; but when standing up, apex impulse is seen in fifth left interspace, just outside nipple line. Respiratory murmur below right clavicle is distant and tubular, getting fainter as we descend. On left side respiratory murmur is full, and accompanied by moist crackling râles.

Behind.—The percussion note is impaired, but not dull, all down right side. It is full and resonant on left side.

The respiratory murmur on right side can be heard distant and tubular over the scapular region, getting weaker, until it is quite lost at the base.

On left side the respiratory murmur is well heard all over, and is accompanied by moist râles at the base.

Conclusions.—By long compression, &c., the right lung has not been able to expand when pressure was relieved, and chest wall collapsed to meet it. The lower portion is probably carnified with no air entering it. The upper portion is less affected, and the air can be heard entering the larger bronchial tubes.

The left lung has undergone a compensatory hypertrophy to some extent, and the edges of it are probably emphysematous, overlapping and obliterating the usual cardiac dullness. This lung at present is in a state of catarrh of the finer bronchial tubes, especially towards the base and cardiac edges.

III.—SEPTIC ARTHRITIS OF THE ANKLE-JOINT DURING
CONVALESCENCE FROM MUMPS.

BY DR. JOHN W. FINDLAY.

When about 5 months old this child took mumps, and was out of sorts for a little over a week, but never had a temperature of more than 100° F. The parotid swelling was more marked on the right side, and was quite unequivocal. Moreover, several children in neighbouring houses suffered at the same time from well-defined mumps. Just when convalescence seemed about to be established, a diffuse swelling, with redness of the skin, appeared in the region of the left ankle-joint. Coincidentally with this the child became ill, and the temperature went up to 102° F. I regarded this affection as erysipelas, and for three days I persevered with moist carbolic dressings. Then I opened what I took to be a superficial abscess below the external malleolus. Several exploratory punctures were also made over the dorsum of the foot, but here only serum was obtained. The child, however, did not improve, and by the end of a week from the time of opening the abscess crepitation was detected for the first time in the ankle-joint, and only then was the suspicion of a septic arthritis confirmed. That same day I opened into the ankle-joint on its inner and outer aspects, scraped away with a sharp spoon granulation tissue, *debris*, and some small fragments of cartilage, and after douching the joint, packed it with iodoform gauze. In two days the gauze was removed, and a drainage-tube was kept through the joint for a week; then the wounds were allowed to heal.

It was expected that the child would have a stiff ankle, but now, five months from the time of operation, there is very little, though some, limitation of movement; the left foot is also a little colder and smaller than the right.

It is difficult to find sufficient cause for the purulent synovitis that occasionally attacks young infants. An explanation has been sought in the bowel troubles incident to that age, but of such complaints this child had none. Arthritis—serous and purulent—is a frequent concomitant of many of the exanthemata. Osler¹ mentions arthritis among the complications of mumps, and Steele² says that very rarely the sequela of purulent arthritis occurs. Septic complications, however,

¹ Osler, *The Principles and Practice of Medicine*, 1901, p. 91.

² Steele, Keating's *Cyclopaedia of the Diseases of Children*, 1890, vol. iii, p. 1133.

would seem to be rare in mumps, though they are not unrecorded. Thus it is admitted that in true mumps the parotid gland may occasionally suppurate, and it has been suggested¹ that there is no essential difference between primary parotitis and the so-called secondary or suppurative parotitis. Besides, Armstrong² reports as a complication of mumps a case of suppurative orchitis, and in the orchitis so frequently following mumps there may be a muco-purulent discharge from the urethra.³ Osler⁴ and Monro⁵ also declare that otitis media may occur, while, on the borderland of septic processes, we may get, though rarely, according to most authors, endocarditis and meningitis.

The above evidence would seem to suggest that this septic arthritis, developing during convalescence from mumps, was not a mere coincidence, but was in some way or other consequent on, and dependent on, the attack of mumps.

IV.—TWO CASES OF EMPYEMA TREATED SURGICALLY.

By DR. HUGH H. BORLAND.

These two patients are shown as a striking contrast to the case demonstrated by Dr. Dunlop, where there had been spontaneous cure of empyema. In both the cases now shown, the empyema, which was treated surgically, arose as a sequel of pneumonia.

One of the patients was a child, æt. 15 months, and the other a girl, æt. 12. In both cases there had been a typical relapse following the crisis.

An exploratory needle revealed the presence of pus on the first insertion; and both patients were operated on in a few hours thereafter.

The early operation yielded excellent results; examination now shows that percussion and respiratory murmur are alike on both sides and absolutely normal.

Dr. Barlow, in reply to *Dr. J. W. Findlay*, said he would select the site of incision shown on these two patients. He would not turn the child on to the side available for breathing.

¹ Rex, Keating's *Cyclopædia of the Diseases of Children*, 1890, vol. i, p. 767.

² Armstrong, *New Orleans Med. and Surg. Journ.*, 1882-1883, N.S., vol. x, p. 678.

³ Osler, *loc. cit.*

⁴ Osler, *loc. cit.*

⁵ Monro, *Manual of Medicine*, 1903, p. 80.

He preferred to place the child on a high table, and to make the incision working from below. A general anæsthetic, rather than cocaine, should be employed, but it was important in empyema not to push the chloroform.

Dr. Jas. Dunlop asked if it were usual in cases of empyema in children, where chloroform was not given, to use cocaine.

Dr. T. K. Monro quoted a case where cocaine was used instead of chloroform, and the patient died within a few minutes after the operation.

Dr. T. C. Barras asked if all adults with empyema should not get chloroform. He mentioned a case where a man was operated on suffering from empyema. In this case eucaïne had been used, and the man died forty-eight hours later.

Dr. Granger spoke of the difficulty he had as a general practitioner in determining when a pleurisy with effusion passed from that state into one of pus formation; he said one cannot always be using the hypodermic syringe.

Dr. T. K. Monro stated, in reply, that most cases of empyema were suppurative from the outset. A useful procedure was to examine the fluid removed from the chest by a hypodermic syringe. If purely *dropsical*, the cells it contained were endothelial; if from *tubercular pleurisy*, the cells were mostly lymphocytes with a single nucleus; but if, on the other hand, the pleurisy was already, or was to become suppurative, the cells were mostly polymorphonuclear.

V.—A CASE OF ANEURYSM OF THE INNOMINATE.

By DR. HUGH H. BORLAND.

Patient was a woman, aged 70. The tumour was noticed by her for the first time eight years ago. The pupils were equal. There was no involvement of the recurrent laryngeal nerve; but the tumour had brought about incompetence of the aortic valves with the production of V.S. and V.D. murmurs. Capillary pulsation was made out as well as the typical water-hammer pulse. A systolic murmur was heard over the aneurysm.

VI.—TUBERCULAR DISEASE OF THE ANKLE-JOINT.

By DR. R. M'C. SERVICE.

The history of the parents presents a picture of tubercular predisposition. They have been married for twenty-two years, and have had twelve children—four were stillborn at full term, four died of tubercular meningitis, and four are alive.

The patient, a girl, æt. 14, complained of her ankle first in July, 1901. It was then swollen and painful. Nothing was done from that time till 29th September, 1902 (fourteen months), when she went to the Glasgow Royal Infirmary, and remained in residence there for five weeks.

According to her statement, "the bone was scraped." The girl again entered the Royal Infirmary on 14th April, 1903, six months after her former residence, and remained four days. Amputation was proposed and rejected. Since then the ankle-joint had been in a poroplastic splint. Some discharge took place after her last dismissal from the hospital, but for the last three months it had been of the most trifling character.

Dr. Service said he did not think that this was the last of the story, but if the foot could be kept on, it was a most important thing for the girl; and he brought the case before the Society as an illustration of conservative surgery.

MEETING III.—4TH NOVEMBER, 1903.

The President, DR. CHARLES R. M'LEAN, in the Chair.

THE MIDWIFERY FORCEPS.

BY DR. MALCOLM BLACK.

Dr. Black, in an exhaustive paper, introduced a discussion on the forceps, and showed that they had been used for three hundred years; the first hundred years of this period they were used exclusively by the Chamberlain family.

The different forms assumed were innumerable, but important ones might be classified into three primary types—(1) Straight forceps (with one cephalic curve), (2) double curve (with cephalic and pelvic curves), (3) axis-traction. The modern instruments of the third class are represented by those forceps associated with the names of Neville, W. L. Reid, and Milne Murray respectively.

Dr. Black proceeded to compare the relative merits of various forceps, and pointed out the indications for the preference of one form over another, according to the different complications met with in midwifery practice; also where

their application was imperative, alike in the interest of the mother and in that of the child. He said that in cases of contracted pelvis, straight forceps were hardly ever possible. Traction with straight forceps was a simple affair, but with double curved forceps it was not so easy. He believed that *modern axis-traction forceps* were the best. Dr. W. L. Reid's forceps, he thought, were very effective in efficient hands. He found Milne Murray's very useful and reliable.

Apart from cranial presentations, forceps were occasionally used in the case of impacted breech, but for his part he always brought down a foot, and, if necessary, the forceps could be applied to the after-coming head.

He said it was often a difficult question to determine at what time forceps were justifiable, and each case must obviously be decided on its merits, but he was strongly of opinion that this should never be to suit the convenience or the time of the medical attendant.

Referring to the use of ergot, he believed it was better not to use this drug unless in rare cases, and he mentioned a case of twins where ergot had been given by a medical man in the Highlands, with the result that rupture of the uterus occurred, and the patient's life was only saved by the atmosphere charged with ozone in the proximity of the Atlantic seaboard where she lived, no operation being performed.

Dr. Jardine said that Dr. Black had raised many points for discussion, but the evening was so far advanced that he would only take up two. Dr. Black had spoken of three types of axis-traction forceps, and had given Reid's as one type, Neville's as another, and the Simpson-Tarnier (Milne Murray's) as the third. True, axis-traction could only be got when the traction rods were jointed on the centre of the point grasped by the blades. In Milne Murray's forceps, to make them absolutely true, the joint would require to be in the fenestra; but, as a matter of fact, the error was so small that it could be disregarded. He (Dr. Jardine) denied that Reid's forceps were axis-traction ones. As he understood them, the blades were intended to be applied to the sides of the head. In a flat pelvis, with a transverse position of the head, when they were applied antero-posteriorly as regards the pelvis, the backward curve of the handles would certainly bring the point on which you pulled behind the perineum, and you would get traction in the right direction while the head was in the brim; but let the head be down in the pelvis, and lying antero-posteriorly, then the curve would throw your line

of traction away to one side. He had never used them, but he had seen them used by Dr. Reid himself, and he was so unfavourably impressed with the results that he had never tried them. He might also add that he had delivered a live child with Milne Murray's forceps, after Reid's forceps, in the hands of an extremely capable man, had failed to budge the head.

He had no hesitation in saying that either Simpson's or Milne Murray's forceps were the best suited of any form for all deliveries, and especially in contracted pelves. He spoke from an extremely wide experience.

There was another point he would refer to, and that was the delivery in flat pelves. Dr. Black had referred to this. At one time version was the method of delivery, but since axis-traction forceps had come into use, version had largely been given up. He was quite convinced that there were certain cases in which version was preferable to forceps. To make his meaning clear, he would shortly refer to the mechanism of labour in a flat pelvis. The head lay with the occipito-frontal diameter in the transverse of the pelvis, and its biparietal diameter in the conjugate. When the uterine contractions began to force the head into the brim, the wedge shape of the head caused a movement in the direction of the wider end of the head, the occipital, and in this way a shorter diameter, the bitemporal, was substituted for a longer one, the biparietal. The head passed the brim with the bitemporal diameter in the conjugate, and in many cases a spoon-shaped depression would be noticed at the back part of the temple, where the promontory had pressed. As the head began to descend in the anterior parietal presentation, the sagittal suture would be noticed to travel towards the promontory, until the anterior parietal bone was well down into the cavity of the pelvis. In some cases the ear could be felt just behind the symphysis pubis. The head then became pivoted, as it were, on the symphysis, and the posterior parietal was driven round the promontory, the sagittal suture now coming forwards towards the centre of the pelvis. The posterior side of the head would be more or less indented by the promontory. When the head had once passed the brim, the remainder of the mechanism would be the same as in a normal case, viz., flexion, internal rotation, and extension. As the outlet was enlarged expulsion would be easy.

When the posterior parietal bone presented, the only difference was that as the head was driven into the brim the sagittal suture travelled towards the symphysis, and when the posterior

parietal was well down, the head pivoted on the promontory, and the anterior side of the head was driven down round the symphysis, the sagittal suture now travelling back towards the centre of the pelvis. The posterior side of the head would probably be indented by the promontory. The remainder of the mechanism would be as in a normal pelvis.

The rounding of the symphysis was much more difficult than that of the promontory, because the zone of resistance was much greater, nearly the whole of the anterior side of the head being in contact with the anterior wall of the pelvis, while in the other case the only part of the head which was resisted was that which was in contact with the promontory.

The first important point was to decide whether or not the head would pass through the pelvis, so as to give a live child. No definite rules could be laid down on the basis of the length of the conjugate. The length of the conjugate was fixed, but it must never be forgotten that the size of the child's head was a very variable quantity, and, besides the size of the head, its compressibility should also be taken into account. It was impossible to measure the exact size of the head, but the amount of overlapping of the symphysis would enable one to form a very good estimate as to whether or not the head would pass. With the patient in the lithotomy position, introduce the fore and middle fingers of one hand into the vagina, and bring the thumb of the same hand up over the symphysis, and then push the head firmly into the brim with the other hand over the lower part of the abdomen, and you would easily be able to estimate the amount of overlapping, and also the compressibility of the head. If the symphysis was much overlapped and the head hard, the chances of getting a live child through without increasing the size of the conjugate were extremely small. Experience alone would teach one as to the possibility of getting a head through, and unfortunately one could not impart his experience to others.

He maintained that in anterior parietal presentations forceps should be used, and in posterior parietal ones version, provided it could be done. He was, of course, speaking of cases in which the head would pass with a reasonable amount of traction; if this were not so, and the child alive, symphysiotomy or Cæsarean section should be done first hand, and not after failing with forceps. In proof of his contention, he instanced the following case:—

The labour, the second, was at full time. When he was called the membranes had ruptured. The os was about half dilated. The head, which was large, lay above the brim

transversely, the occiput towards the left, and with the sagittal suture in front of the centre of the pelvis, near the symphysis. The two fontanelles lay on about the same level. It was thus a typical posterior parietal presentation. The pelvis was very broad and slightly flattened. The true conjugate was barely 4 inches. An ordinary sized head would have given no difficulty with so large a conjugate, but it was quite evident that the head was above the average size, and after delivery this was seen to be the case. The symphysis was slightly overlapped.

As the uterus was not retracted round the child, and the foetal heart was quite strong, he determined to wait for some hours to allow of full dilatation of the os and moulding of the head. Seven hours after the rupturing of the membranes the head had not advanced any, although the uterine contractions had been fairly strong. As the contractions were now becoming weaker, he determined to deliver, as it was quite evident this would not occur by natural efforts. Dr. Louise M'Iroy assisted him.

As the uterus was not retracted round the child, he determined to try first with forceps, and if that failed, to do version. He said he was very strongly of opinion that version should not be done after failure with forceps, *i.e.*, after a lengthy trial of forceps, but this case did not come under that heading, and he was confident that the patient would not suffer.

He applied a very considerable amount of traction, but, as he expected, did not advance the head in the least. He then removed the instruments and turned without any difficulty. Dr. M'Iroy kept up firm suprapubic pressure, and the arms were easily released. The aftercoming head was delivered by traction and suprapubic pressure. The child was asphyxiated, but began to gasp in a minute or two, and did not require artificial respiration. It was a large healthy male, and weighed 8½ lb. Its head was considerably above the average size, but was not indented by the promontory.

This was the only case in which he had actually tested this theory, but he had failed so often with forceps in posterior parietal presentations, where the disproportion between the head and the pelvis was not any greater than in successful anterior parietal presentations, that he was quite convinced that his contention was a sound one.

If the movements of the head were considered, it was easy to see why forceps were better adapted for delivery in anterior than in posterior parietal presentations. The traction naturally tended to swing the head round the symphysis, and thus to

follow the natural mechanism of the anterior parietal presentation. To follow the natural mechanism of the posterior parietal presentation, it would be necessary to swing the head backwards, which the forceps could not do.

In conclusion, he would again refer to the importance of making an estimate of the chances of getting a live child through before attempting to use forceps. If the disproportion was very great, there was no use in putting on forceps and dragging on a head which could not pass. Some other form of delivery ought to be adopted, preferably one which would save the child, provided, of course, the risk to the mother was not increased. He would also add, never begin a case unless you are prepared to finish it.

Dr. Oliphant said he had used *Dr. Reid's* forceps for over twenty years and he had never been beaten with them. They were not straight forceps, and were not designed for antero-posterior presentations. The blades were applied on the side of the child's head. It had been stated that they were not axis-traction, but he wished to say emphatically that they were traction forceps, though not antero-posterior.

MEETING IV.—11TH NOVEMBER, 1903.

The President, DR. CHARLES R. M'LEAN, in the Chair.

ADJOURNED DISCUSSION ON THE MIDWIFERY FORCEPS.

Dr. John Patrick remarked upon the absence of opposition from the first on the part of the public to the use of the forceps, as contrasted with the manner in which the introduction of chloroform was opposed—the reason probably being the gradual way in which forceps came into use. He had been using *Neville's* forceps for some years past, and had succeeded in effecting delivery with less energy than he had to use before with the ordinary forceps. Multiparæ, he found, frequently required forceps in the seventh, eighth, and later confinements (in cases where there was no inertia), though they did not require instrumental delivery in their earlier confinements. This might be due to greater fixity of the sacro-iliac synchondrosis or symphysis.

Dr. Jas. Dunlop related a case where labour was induced at the eighth month. The conjugata measured $2\frac{1}{4}$ inches. With *Milne Murray's* forceps in the transverse, he had the utmost difficulty, owing to the forceps slipping. The cord was prolapsed and the child dead. He thought he would have been better in this case to have waited till the full time, and turned.

Dr. P. S. Buchanan took exception to *Dr. Black's* statement that "a case for ergot is *always* a case for the forceps." He considered that in suitable cases, if inertia in multiparæ, where the parts were fully dilated, and there was no obstruction, ergot in small doses might be preferable to the use of forceps, as there would be less risk of post-partum hæmorrhage than with delivery by the forceps in the absence of uterine action. He thought it was no argument to adduce as an objection to a valuable remedy the possibility of its abuse.

Dr. Samuel Sloan referred to some points in which he differed from text-books, and drew attention to the importance of forceps having an easy lock. He showed how his own forceps (antero-posterior compression forceps at the brim), and *Dr. Reid's* forceps, when applied, lay on the oblique. He showed how axis-traction could be applied to ordinary forceps, and the cause of the forceps slipping—the blades slipping behind the head. The blades of axis-traction forceps took up more room, and might prevent rotation of the head in the cavity. Straight forceps would then be useful, and would allow of rotation. He thought it was almost criminal not to send for the forceps required; long forceps in an easy case were all right, but not sufficient for all. He himself always carried three pairs of forceps, and had delivered children alive by the use of three pairs, which he would not have been able to save without them.

Dr. Black, in reply, said that *Milne Murray's*, *Neville's*, and *Reid's* forceps were all axis-traction, more or less. With *Neville's*, one was apt to be pulling too far back, and so pull the blades off the head, so that they would slip more readily than *Milne Murray's*.

On the motion of the *President*, a cordial vote of thanks was given to *Dr. Black* for his paper.

REVIEWS.

Obstetrics: A Text-Book for the Use of Students and Practitioners. By J. WHITRIDGE WILLIAMS. With 8 Coloured Plates and 630 Illustrations in the Text. New York and London: D. Appleton & Co. 1903.

THE number of books on obstetrics which has recently been placed upon the British market by American obstetricians, would almost lead one to think protection had been scented. We are of opinion that if protection had kept some of these books off the market the practitioners of this country would not have lost much. This, however, does not apply to *Obstetrics* by J. Whitridge Williams. In some respects it is one of the best books on obstetrics which has appeared within recent years. Like all the other American books, it is very profusely illustrated, there being no less than 8 coloured plates and 630 ordinary illustrations in it. Most of these illustrations are useful, and some of them extremely good, but some of them, such as those of naked women in the erect posture, from a scientific point of view, are useless. In this country, at least, obstetricians are not in the habit of stripping women stark naked and standing them up before them in order to view the slope of the abdomen. We wish to enter a protest against the growing tendency towards thus adorning the pages of scientific books with pictures of the "altogether."

The book is arranged in the usual way. The normal and pathological anatomy of the generative tract is very concisely and clearly dealt with. In reference to menstruation, the author maintains that there is very little shedding of the mucous membrane.

In dealing with the maturation, fertilisation, and development of the ovum, he does not attempt to trace the development of the ovum through all its stages, but he very clearly describes the changes concerned in the formation of the foetal membranes and placenta. The illustrations in this chapter, which include many microscopic sections of the different deciduæ and placenta, and also a plate of Peters's ovum done in colours, are very beautifully done. The corrosion preparation of the placenta, with the arteries injected with red celloidin, and the veins with blue, admirably shows the vascular arrangement. This part of the book is extremely well done, and gives a very

clear statement of the most recent investigations by Peters and others.

In the management of a normal pregnancy Dr. Williams insists that "the patient's urine should be examined once a month for the first seven months, and at least twice a month, and preferably every week, during the last three months of pregnancy." He also insists that a preliminary examination of the patient should be made from four to six weeks before the expected date of confinement. He says "to neglect in this respect can be attributed the deaths of untold numbers of women and children." In most cases external palpation and measurement is all that is required, but, if anything abnormal is found, a thorough internal examination should be made. The author is so strong on the importance of this preliminary examination that he says if the patient refuses to allow it the doctor should refuse to attend her. These are advanced views, but we quite agree with them. To carry them out entirely is, however, often beyond the powers of an ordinary practitioner, but, in every case one should attempt to do so, as far as lies in his power.

Dr. Williams is a strong believer in asepsis, and he, therefore, advocates abdominal palpation in conducting normal labour, and states that he conducts 50 per cent of his normal cases without making a vaginal examination. The methods of doing abdominal palpation are admirably described and beautifully shown by shadowed illustrations. These illustrations might lead one to suppose that a diagnosis of the exact position of the child can easily be made in every case. With a thin abdominal wall and an ordinary amount of liquor amnii it is easy enough; but what about stout women and those with a large amount of liquor amnii? Besides this there are certain conditions, such as prolapse of the cord, impaction of the anterior lip of the cervix, &c., which cannot be diagnosed by palpation. Abdominal palpation should certainly never be omitted, but ordinary practitioners cannot afford to trust to it alone. If the external genitals are properly cleansed, and the examiner's hands surgically clean, as they should be, the risks from a vaginal examination may be discarded. We have more than once seen cases of violent sepsis where no examination had been made, but where the external parts had not been cleansed.

In the management of the third stage of labour the author strongly advocates waiting, and trying Cr  d  's method of expulsion repeatedly for at least two hours before removing the placenta manually. We cannot agree with this repeated

kneading and crushing of the uterus. It will certainly do more harm than introducing the clean hand and peeling off the placenta. In a recently reported case the uterus was ruptured by Crédé's method.

In describing the mechanism of labour, the author only gives one theory of flexion—the lever one—which, in our opinion, is not the true one.

The induction of premature labour in contracted pelves is condemned. It is held to be justifiable when there is a disproportion between the size of the head and the pelvis only in cases of normal pelves when the head is unduly large. He advocates Cæsarean section for contracted pelves, and is not an admirer of symphysiotomy in the minor degrees of contraction. We cannot agree with this, although we admit more children will be saved, but, until the mortality after Cæsarean section is very much lower than it is at present, induction of labour is much the safer operation for the mother. In describing Krause's method of induction (which he does not recommend) he speaks of using catheters. If he uses catheters, we can understand his preference for Cæsarean section. He prefers Champetier de Ribes's bag. It is certainly a rapid method, but it is not devoid of risks. For doing accouchement forcé he does not mention Bossi's dilator, which is now so much used.

The chapter on hæmorrhages and inversion of the uterus is decidedly weak from a practical point of view. One can hardly credit the statement that in his extensive experience Williams has only seen three cases of accidental hæmorrhage. The condition must be an extremely rare one in America. We have seen as many severe ones inside of a week. As regards treatment of the different forms of hæmorrhage, this important subject is most inadequately dealt with.

The part of the book dealing with the different forms of contracted pelves is extremely well written, and very freely illustrated.

The author is a firm believer in the auto-intoxication theory of eclampsia, but advances nothing new. Morphia, with rapid delivery, seems to be his chief method of treatment. He merely mentions saline infusions.

The pathology of the puerperium is very fully discussed. Bacteriological examinations of the lochia is strongly advised. In septic endometritis he believes in clearing out the uterus with the finger, but is against curetting. As regards douching, he strongly condemns the use of perchloride of mercury or carbolic acid. Sterilised saline solution is what he uses. He

says he has treated 52 cases of streptococcic endometritis with only 2 deaths. In 30 of the cases it was a pure streptococcic infection, and all recovered; while in 12 cases in which it was associated with the colon bacillus or other organisms 2 proved fatal. He is a strong advocate of strychnine and alcohol, and the external application of cold instead of antipyretic drugs. He also speaks favourably of subcutaneous saline injections. He is not in favour of extirpation of the uterus in septic cases. He is certainly to be congratulated on his wonderful results in treating septic cases.

There are many more points in this book which we would like to have discussed, if there had been space, but we have said enough to indicate that it is a book worth having, and we can cordially recommend it to teachers and all who take a deep interest in obstetrics. It is certainly one of the best books of its kind which has appeared within recent years. Each of the chapters has an extensive bibliography appended to it, so that original papers can easily be referred to.

A Text-Book of Obstetrics for Practitioners and Students.
By Thirteen American Authors. RICHARD C. NORRIS, M.D.,
Editor; ROBERT L. DICKINSON, M.D., Art Editor. With nearly
900 Illustrations. Second Edition Revised. Two Volumes.
London: W. B. Saunders & Co. 1902.

THIS American *Text-Book of Obstetrics* forms a handsome and valuable addition to obstetrical literature. Among its authors are many well known names besides those of the editors, such as Garrigues, Hirst, Howard Kelly, Reynolds, and Clarence Webster, all names that lead us to expect an able treatment of the subjects to be dealt with.

Perhaps we should at once express our approval of the work as a whole. Its main defects are inherent in the attempt to combine the elementary methods which are suitable to "students" with the more elaborate methods which are required by "practitioners." In every subject it is difficult, if not impossible, to define exactly the proper limits of a textbook. On the one hand, if it is to be used by the student, it must be elementary enough to be understood and appreciated by him, and it must state authoritatively the well-established facts and laws of the subject. On the other hand, if it is to suit the practitioner, it must treat of questions of pathology and diagnosis which are not yet authoritatively decided, and

which require exhaustive discussion in order to make their present position clear. It is manifestly difficult to combine in one book the qualities of a students' text-book and an exhaustive treatise, and it may even be doubtful if the attempt should be made. In the *American Text-Book of Obstetrics* this difficulty has been met in perhaps as effective a way as possible, but the results are not always satisfactory. This is especially evident in the section on the Pathology of Pregnancy in Vol. I, and in the sections on the Pathology of the Puerperium and the Pathology of the Newborn Infant in Vol. II. In all these sections the reader feels that too much has been attempted, and the result is inadequate. It is, perhaps, also rather out of date to introduce a treatise on Human Embryology into a work on obstetrics.

These defects, however, detract very little from the general excellence of the work. The section on the Mechanism of Labour by Reynolds, strikes us as being specially good. It is brief, and yet clear, and the paragraphs on treatment are moderate in statement and free from the extravagances sometimes indulged in by American authors. On the whole, we feel that we can strongly recommend this work as one of the best guides to the science and art of midwifery with which the student has been supplied.

Edinburgh Obstetrical Transactions. Volume XXVII.
Edinburgh: Oliver & Boyd. 1902.

OF several valuable papers in this volume, the following may be specially mentioned:—"The Nature of the Tuberosc Fleahy Mole" (D. Berry Hart). The origin of these moles is ascribed to an undue blocking of the sinuses in the large-celled layer of the serotina, followed by a slow engorgement of the intervillous circulation. The chorio-basal septa bulge out, and as these tack down the chorion at definite points, the amnion and chorion bulge up between and so produce the characteristic finger-tip-like projections, five or six in number, which are seen on the chorionic surface. The death of the embryo is secondary to this interference with the circulation, and the placenta becomes a thrombosed mass. It will be seen that Hart now recants from his former view that the death of the embryo in such cases is primary.

"Some Remarks on Diagnostic Help in Gynæcology" (Professor Fehling). Probatory laparotomy should be rarely

resorted to; if performed, and if inspection and palpation then show the impossibility of an operation, the abdomen should be closed at once; a half-finished operation is extremely dangerous; diagnostic puncture is advantageous in many cases; the pseudo-mucin, which is characteristic of the contents of ovarian cysto-adenomata, can be diagnosed by Pfannenstiel's glycoproteid reaction.

"An Experimental Study of the Pelvic Changes produced by Separation of the Pubic Bones in Symphysiotomy" (A. C. Sandstein). This is an elaborate and instructive paper. His conclusions are as follow:—The pubic separation must not be more than 6 cm.; the true conjugate should measure at least $2\frac{7}{8}$ inches; Walcher's position must be used, and the sides of the pelvis supported; care must be taken to secure equal movement on the two sides of the pelvis, as unequal movement tends to produce rupture of the ligaments and perforation of the bladder or vaginal wall; division should be always through the cartilage, never through the bone, as the latter leads to necrosis and fistula; it is advisable not to divide the subpubic ligament.

Modern Methods in the Surgery of Paralyzes. By A. H. TUBBY and ROBERT JONES. London: Macmillan & Co. 1903.

IN this most interesting monograph, the authors open up a wide field of thought so far as concerns the surgical treatment of paralysis from various causes. The volume is arranged in three sections, of which the first deals with the subject of infantile palsy. This section, as is natural, occupies a large part—two-thirds—of the book. The second section is devoted to spastic paraplegia, and the third groups together a miscellaneous collection of various conditions associated with paralysis, such as fractures and dislocations, spina bifida, Pott's disease, &c.

Throughout the volume, the keynote is the placing of "weakened muscles under mechanically favourable conditions." This is done by apparatus, or by tenotomy of opposing muscles, or by a combination of both measures. A noticeable feature of the work is that apparatus described is capable of being produced at a low cost—a point of considerable importance. Another point to which attention is directed in the section on spastic paraplegia is that the patient must be prepared to remain for a long time under the surgeon's

supervision, the mere operation being but a part of the treatment. The reader is also cautioned not to rush blindly at a case, but to try to form a judgment as to its suitability for operative treatment, and the main lines on which to form a sound judgment are laid down carefully.

The text is illustrated by the records of many cases, and by a considerable number of figures.

We feel indebted to the authors for a work which will be welcomed alike by the surgeon and the general practitioner. It presents in a handy form an immense amount of information as to the treatment of very distressing conditions, and we doubt not that its influence will make itself felt, and felt widely, in an altered attitude of medical men towards their cases. We are sure that it only needs to be read to stimulate others, and we should expect that, at no very distant date in the future, the literature of the subject will reflect the teaching of this volume.

Transactions of the American Surgical Association.. Vol. XX. Edited by RICHARD H. HARTE, M.D. Philadelphia, 1902.

THIS volume, like its predecessors, contains much interesting reading. The bulk of the papers deal with abdominal surgery, such as the "circulus vitiosus," tuberculous peritonitis, pyloroplasty, hysterectomy, &c. There are also several contributions to prostatic surgery, and an interesting article on the radical cure of aneurysm by arteriorrhaphy.

In addition to the ordinary index, there is a general index of Volumes I to XX, as well as a list of Fellows for the years 1880-1902.

This volume reflects great credit on its editor.

Theory and Practice of Surgery. By W. J. WALSHAM and W. G. SPENCER. Eighth Edition. London: J. & A. Churchill. 1903.

IN this edition, we find not only an expected increase in size, but the addition of Mr. Spencer's name to the title-page. The various former editions of this work are well known to our readers. We can only say that its well-deserved reputation

has been maintained ably by Mr. Spencer. We have received the volume at a time when the author's friends are mourning his decease, but we feel sure that "Walsham's Surgery" will long prove a monument to the energy of its original writer.

A Text-book of Operative Surgery for Students and Practitioners; The Surgical Anatomy and Operative Technic involved in the Operations of General Surgery. By WARREN STONE BICKHAM, M.D. London: W. B. Saunders & Co. 1903.

IN the preface, the author declares that the sub-title of the volume "sufficiently indicates its intended scope," and we agree with him. No apology seems to us to be necessary to be called for for the amount of anatomy given. There is a very full supply, but it is given without padding, and in such a way as will refresh the memories of readers who may be rusty. The work is arranged in two divisions. The first, or general, deals with tissues and with classes of operation, *e.g.*, arteries, nerves, bones, &c., and with amputations and excisions. The second division deals with special surgery, or operations on the different regions of the body.

This text-book is written in a somewhat unusual style, the operations described being, throughout the work, arranged on a very definite plan. The plan adopted is that of placing each step of the operation in a numbered sentence or paragraph. This renders consultation of the work a matter of extreme ease, and at the same time it avoids redundancy. For example, in the description of Von Hacker's method of performing gastro-enterostomy, "Sections (9), (10), (11), and (12) of the Posterior Gastro-enterostomy are performed exactly as are the corresponding steps in the Anterior Gastro-enterostomy, where they are found described under Sections 6, 7, 8, and 9" (pp. 784, 785).

The 559 illustrations have all been drawn specially, the large majority being original, and the remainder so largely modified as to be practically new. The result is most happy, and the author is to be congratulated on the work of his artist.

The volume is a heavyweight, but in view of the amount and range of its contents we might, without intending any disrespect, call it a *multum in parvo*. It will not displace larger works from the shelves of the surgeon's library, but it

will certainly prove a valuable substitute for these in the library of the busy practitioner, and it will be used by surgeons as a handy work of reference.

Transactions of the American Dermatological Association, 1902. Chicago: P. F. Pettibone & Co. 1903.

THIS volume is a striking proof of the activity existing amongst American dermatologists. A further proof of this is found in the address of the President, Dr. G. T. Jackson, in which he gives the story of the Association's first twenty-five years of life, with a long catalogue of the writings of its members.

"Cases of Bullous Dermatitis following Vaccination" is the title of a paper by Dr. T. S. Howe. The ten patients were adults, and had been recently revaccinated, with one exception. Calf lymph was used, and the vaccinations ran a normal course. The bullæ appeared on an average in five weeks after vaccination. The average duration of the cases was six weeks. Six of them ended fatally. The author does not consider the disease to have been due to vaccination, but probably to some infection introduced at or after it. He is inclined to call it pemphigus.

Dr. Bowen discusses four cases illustrating "Four Forms of Generalised Exfoliative Dermatitis," which he believes arise from different etiological agents.

"The Symptoms and Treatment of Acne" are dealt with by Dr. G. H. Fox. He advocates strict diet, cold baths, systematic exercise, and the frequent use of the curette.

Blastomycosis, radiotherapy, the dermatoses of the insane, diseases of the nails, epidermolysis bullosa are amongst the subjects included in the nineteen papers which form this interesting volume. Illustrations are numerous and excellent.

A Pharmacopœia of Diseases of the Skin. Edited by JAMES STARTIN. Fifth Edition. Bristol: John Wright & Co. 1903.

THIS useful little work has been brought up to date by the addition of the drugs and methods which have made a place for themselves in dermatology since 1896.

A Text-Book of Legal Medicine and Toxicology. Edited by FREDERICK PETERSON, M.D., and WALTER S. HAINES, M.D. Vol. I. London: W. B. Saunders & Co. 1903.

A CAREFUL perusal of this volume is sufficient to show that, taking the first volume as a fair sample, the work will at once take its place among the monumental treatises on the subject as one of the very highest merit. Written and compiled in characteristic American style, it combines the good points of every other text-book in the English language. There are no fewer than sixteen contributors to this volume, and these contributors are not confined to a limited area, but come from widely separated districts of the American Union. The advantage of this distribution of labour, and the consequent more thorough treatment of each division of the subject, is well exemplified in this volume, which reflects the utmost credit on the editors and contributors alike.

While, no doubt, written chiefly from the American standpoint, no effort has been spared to give the very broadest treatment in each section by the inclusion of the opinions of the recognised British and Continental authorities, with the result that the work is truly a cosmopolitan one, which appeals with special force to the whole English-speaking race. No better compliment can be paid to the work than to say that it is at least on a level with Taylor's *magnum opus*, and that in many respects it is much in advance of that undoubtedly excellent work. Of course, owing to the large number of contributors, the work has not the personal charm appertaining to a book which embodies the experience of one individual, such as, for example, Professor Glaister's well known volume. At the same time, what is lost in direct charm in this way is perhaps more than gained by the value which the present work has as a book of reference which embodies the results of the labours of many investigators.

Unlike the usual American book the illustrations in this volume are not of any special excellence. The original illustrations are relatively few and unimportant, although Fig. 16 (Peyer's patch from a case of status lymphaticus) is a marked exception to this.

A number of plates from Hofman's *Atlas* have been inserted, but in a work of the present magnitude it seems a pity that readers should not be allowed to refer to this *Atlas* at their discretion, and that fresh plates should not have been prepared with more direct bearing upon the cases quoted. In the 700 pages of reading matter in this volume the following divisions

of the subject are treated:—Expert evidence; the technique of medico-legal *post-mortem* examination; identity; the signs of death; sudden death; death from cold, heat, and starvation; death from asphyxia; death and injuries by lightning and electricity; wounds; gunshot wounds; burns and scalds; the destruction and attempted destruction of the human body by fire and chemicals; railway injuries; injuries and disorders of the nervous system, following railway and allied accidents; the medical jurisprudence of life insurance; the medical jurisprudence of accident insurance; the medico-legal aspects of vision and audition; speech disorders; inebriety; the stigmata of degeneration; insanity; idiocy; imbecility and feeble-mindedness; and mental perversions of the sexual instinct.

The short introductory chapter on expert evidence is in every respect an excellent one, and will repay the most careful perusal by all, legal and medical alike, who have any connection with this sadly degraded aspect of medico-legal work.

The instructions for the conduction of medico-legal *post-mortem* examinations are very complete; if anything too much so, as it would take the greater part of a week were the processes described carried out in their entirety. On page 58, line 2 from top, there is a curious substitution of the word "maternity" for "maturity."

The question of identity is treated succinctly and without neglecting any point of real importance, although this chapter might have been made much more instructive by the insertion of a number of well chosen illustrations.

In dealing with the "signs of death" it is stated (page 104) that the hair and nails may grow to a "considerable length" after death. The term "considerable length" is too ambiguous for use in a book of this kind, and the term is unfortunate in any case.

The section on "cadaveric changes" is not quite so good as most of the other sections, and is by no means so full as it ought to be.

Sudden death, with presumption of death and survivorship, is dealt with at greater length, although by the same contributor as the preceding.

Death from cold, heat, and starvation does not call for special criticism. Death from asphyxia is treated more fully than any of the preceding, and is a specially valuable chapter. On page 242 the spectrum of blood charged with CO gas is described as very like oxyhæmoglobin, but narrower, and beginning "a little further to the right;" this is another example of loose and unscientific phraseology not in keeping

with the high standard of excellence the work shows in most other respects.

The chapter on death and injuries by lightning and electricity is by no means so complete as one might expect, particularly having regard to the fact that the work is an American one, and also to the fact that of recent years the effects of currents of high voltage from "live" wires for tramways, &c., are likely to become more prominent as the applications of electricity are extended.

The chapter on wounds is not nearly so exhaustive as it ought to be, and the paucity of illustration here is particularly unfortunate. On page 295 the last sentence of the first complete paragraph on this page belongs to the succeeding paragraph. On page 305, again, in dealing with the question of wounds of the female genitals, it is stated that if incised wounds are found here, especially if they extend within the vagina, they are "positive evidence of malicious assault." It needs little medico-legal acumen to see that this statement is erroneous.

The section on gunshot wounds is very well written, and is as well up to date as this section can be made at the present time; but finality has not been obtained as to the material supplying the explosive force, and the projectiles themselves are still in a process of evolution, so that it appears to be almost useless at present to deal at any length with this subject, with a view of settling the various points for any length of time.

The sections on burns and scalds, and the destruction and attempted destruction of the human body by fire and chemicals, are interesting, but call for no special remark.

The sections on railway injuries and their results are of very high value indeed, and will prove of great service to those who may require to investigate this difficult branch of medical science.

The medical jurisprudence of life insurance gets very full treatment; and although viewed entirely from the American standpoint, its value to medical examiners in this country will be apparent to those who study the section carefully. The same remarks apply, in a lesser degree, to the succeeding short chapter on the medical jurisprudence of accident insurance.

Treatment of such subjects as the medico-legal aspects of vision and audition is somewhat foreign to our conceptions of what is included in the term medical jurisprudence, and, on the whole, this part of the work will not commend itself, for any reason, to readers in this country.

The short chapter on inebriety is pregnant with suggestive remarks on the much vexed question as to responsibility and the degrees of the latter in connection with inebriety in its various stages and degrees.

The sections on the stigmata of degeneration and insanity are copious and complete. In this country, however, the subject of mental alienation is treated as a large and distinct branch of medical science, which can only be dealt with in practice by those who have had long and special training in the subject, and thus it calls for a special class of experts.

The concluding section of this volume, mental perversions of the sexual instinct, while instructive in a very high degree, would not have suffered much, if any, had the cases of sexual aberration which are given been curtailed considerably. It is a matter for regret that the existence of such "sloughs of despond" in sexual matters exist; and elaborate descriptions of cases are not necessary for a proper understanding of the various conditions of sexual perversions.

Most of the important practical points in medico-legal work fall to be dealt with in the second volume.

Tuberculosis. No. 7, Vol. II. July, 1903.

THIS contains several interesting articles on the subject, including—"The Treatment of Infection in Tuberculosis," "Sanatorium Sleeping Accommodation for Poor Patients," "The Project of the Garden City Association," and "Sick Benefit Societies and the Fight against Tuberculosis." The L.C.C.'s new byelaw against spitting inside any public building is discussed.

Where Shall I Send My Patient? Bournemouth: E. J. Frampton. 1903.

As a guide for medical men who have often to decide as to suitable places for their patients, this little work is invaluable, and no doubt will soon become as familiar in the consulting room as the *Medical Directory* itself. Doctors frequently experience great difficulty when asked by patients as to the suitability or otherwise of some resort to which they propose going for a period, and for such cases the information in the present "guide" will prove of very great service. Chapter I

deals with procedure in cases of insanity, all the necessary legal information being concisely given, and this is followed by a list of asylums in the country generally. The other chapters deal with convalescent homes; homes for the blind, deaf and dumb; homes for defective children and epileptics; homes for idiots, imbeciles, and incurables; procedure in cases of inebriety, and homes for inebriates; association of medical men receiving resident patients, with details of their houses; uses and advantages of hydropathic establishments, with tabulated details; nursing homes and nursing institutions, with tabulated details; sanatoria; British health resorts; hotels and boarding houses at health resorts.

The lists given are in all cases very incomplete, especially in the case of those in Scotland; but this is unavoidable, although considerable amplification will be advisable in future editions. The book should be in the hands of every practitioner.

Special Report on Cancer in Ireland: Supplement to the Thirty-eighth Detailed Annual Report of the Registrar-General of Marriages, Births, and Deaths in Ireland.
Printed at Dublin by Cahill & Company for His Majesty's Stationery Office. 1903.

THIS report was the result of attention drawn to the subject of the mortality from cancer by the King in addressing the foreign delegates to the Congress on Tuberculosis in London in 1901. The statistics cover the period 1864-1901 inclusive, and are accompanied by diagrams and maps showing graphically the apparent steady rise in the mortality from cancer in all three countries of England, Scotland, and Ireland during that period. It is to be noted, of course, that the rise may be more apparent than real, for reasons which must be quite well known to the Registrar-General. At the same time there seems good reason to believe that there is an actual rise in the mortality from this disease, and it is well to have carefully tabulated results, such as we are presented with in this report, so that we may at least be able to follow the course of events with regard to the cancer mortality-rate as time goes on. While it seems to be quite clear that Armagh has the highest cancer mortality of all the Irish counties, the reason is by no means apparent, and is after all quite possibly unconnected with the nature of soil and other local peculiarities.

The "Notes of Cancer Cases" are of considerable value, but in most cases are too brief to be of practical value in helping to elucidate this most complicated question as to the effect of local conditions in the causation of cancer.

Report on the Administration of the Rivers Pollution Prevention Acts. By JOHN T. WILSON, M.D., Medical Officer of Health of the County of Lanarkshire. Glasgow: Robert Anderson. 1903.

IN Dr. Wilson's report there is much to engage the earnest attention of all sanitarians. The difficulty which was experienced until recent years in carrying out the provisions of the Rivers Pollution Prevention Acts rendered them almost nugatory, although they date as far back as 1876. Now that practical methods are at command for the prevention of such pollution, there is little excuse for its continuance. The report is quite exhaustive, and its value is greatly increased by a number of instructive plans, maps, and photographs. Dr. Wilson is to be congratulated on the thorough manner in which the work of prevention of pollution has been conducted for the last few years.

Moore's Family Medicine and Hygiene for India. Seventh Edition; Revised by MAJOR J. H. T. WALSH, I.M.S. London: J. & A. Churchill. 1903.

PUBLISHED "Under the Authority of the Government of India" does not disclose exactly the connection between the said Government and this work; and it is to be hoped that the connection is only formal, as although the book may, under certain circumstances have some value, it is almost beyond criticism in the sense that the contents are a kind of "hotch-potch" of pharmacy, elementary physiology and hygiene, and ambulance work. Otherwise the book is on the lines of a familiar work called a *Dictionary of Treatment*.

In the preface to this edition it is stated that the object of the book is to "help the general public," and to show the method by which improper treatment may be avoided. To some extent the book succeeds in these objects; and, keeping in view the fact that it is written for use in India, in some parts of which, no doubt, proper medical advice may not always

be obtainable without considerable delay, its genesis may be justified.

The last ten pages of the book are the best, dealing as they do with the preparation and use of blisters, bandages, baths, &c., and the practical application of methods of disinfection. The last chapter, No. VII, is also good. It deals with the general management of the sickroom, invalid dietary, &c., and might have been much amplified with considerable advantage.

Used with discretion the book will prove of use in conditions under which medical treatment is not available at the time, and in which delay would be dangerous.

Colonial and Camp Sanitation. By G. V. POORE, M.D.
London: Longmans, Green & Co. 1903.

WITHIN the small compass of thirty-nine pages Dr. Poore contrives to pack a veritable mine of information and suggestions on the subjects of sanitation as applied to the exigencies of camp life, and does this in his usual convincing manner. Chapter I deals with camp sanitation proper, and is an admirable contribution to this subject. Chapter II describes an experiment in sanitation in the form of a "model" cottage with mud walls rough casted, designed to be a *multum in parvo* as regards the essentials of domestic sanitation. The subject matter has already appeared in print—Chapter I in the *Lancet* of 18th May, 1901; and Chapter II in *Country Life* of 6th July, 1901. In its present handy form the book should have a wide circulation among sanitarians in general.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By WALTER K. HUNTER, M.D., D.Sc.

Acute Lymphocytic Leukæmia, with Reference to its Myelogenous Origin. By Dr. A. O. J. Kelly (*Univ. of Penn. Med. Bulletin*, October, 1903).—In this paper the author reports four cases of acute lymphatic leukæmia, and then discusses, with considerable detail, the pathogenesis of the disease.

The first case, a man, aged 49, was under observation for two months, the total duration of the symptoms being ten weeks. The illness began with a feeling of being out of sorts, a disinclination for exertion, and loss of appetite. Then there was an attack of what seemed acute tonsillitis; and, later, irregular fever, ranging from 100.5° to 103° , enlargement and tenderness of the liver, and slight enlargement of the spleen. There was no apparent enlargement of the lymphatic glands. The white blood corpuscles numbered 17,000 in the first count, but subsequently increased to 119,500; 98.3 per cent of these were lymphocytes, and most of them large lymphocytes. The *post-mortem* examination showed moderate enlargement of the mesenteric and retro-peritoneal glands, slight enlargement of the spleen, lymphocytic infiltration of other organs, and lymphadenoid bone-marrow.

The second case was a woman, aged 45, and the duration of her symptoms was four and a half weeks. The first symptoms came on eighteen days after her fourth confinement, and consisted of chills, fever, sweats, malodorous lochia; and, later, epistaxis, submucous and subcutaneous hæmorrhages. First blood-count showed 208,600 white blood corpuscles, rising later to 567,200; 97 per cent were lymphocytes, and only 2 per cent of these small lymphocytes. There was no apparent enlargement of the lymphatic glands. At the *post-mortem* there was slight enlargement of the glands and spleen, with lymphocytic infiltration of other organs, and lymphadenoid bone-marrow.

The third case was a boy, aged 11 years, and the duration of his symptoms was about three months. Here the initial symptom was swelling of the glands of the neck, and later, enlargement of all the glands of the body, irregular fever, and hæmorrhages. The white corpuscles numbered 378,000, subsequently diminishing to 198,000; of these 98.6 per cent were lymphocytes, only 1.6 per cent being small lymphocytes. At the *post-mortem* there was seen to be enlargement of all the lymph glands of the body, slight enlargement of the spleen, and lymphocytic infiltration of other organs.

The fourth case was a man, aged 48. The duration of his symptoms was rather indefinite, but for only seven weeks did he seem ill enough for treatment. The initial symptoms were general weakness and slight enlargement of glands. Later on, this enlargement became more pronounced. There was irregular fever, dyspnoea, and hæmorrhages. At first the white corpuscles numbered 9,000, and later, 37,000; 98 per cent were lymphocytes, and of these 4 per cent small lymphocytes. At the *post-mortem* there was enlargement of spleen and lymph glands, gumma and syphilitic cirrhosis of the liver, lymphadenoid bone-marrow.

On microscopic examination of the lymphatic glands, those only slightly enlarged showed but little variation from the normal. In some the germ centres could be distinguished from the sinuses, though the distinction was not as sharp as normal. This was due chiefly to great accumulation of cells in the sinuses, but the germ centres were themselves expanded. In the greatly enlarged glands of Cases 3 and 4 the distinction between germ centres and sinuses was effaced, the structure of the gland being practically homogeneous. The vast majority of the cells infiltrating the glands were large lymphocytes.

In the spleen the microscopic appearances were much like those in the glands, the distinction, however, between follicles and pulp being better preserved in the former. In the bone-marrow, also, the predominating cell was the large lymphocyte. The infiltrations, too, into liver, kidneys, heart, and alimentary tract were also almost entirely composed of large lymphocytes.

In discussing the pathology of leukaemia, Dr. Kelly favours the views of Pappenheim rather than those of Ehrlich. Ehrlich holds that there are two distinct forms of leukaemia—the one lymphatic, due to primary disease of lymph glands, and the other myelogenous, due to primary disease of bone-marrow. Lymphatic leukaemia, he says, is a passive leucocytosis, the non-motile lymphocytes being passively swept into the circulation, while myelogenous leukaemia is an active leucocytosis, the motile marrow-cells passing into the circulation in response to some chemotactic stimulus. Pappenheim, on the other hand, maintains that the primary lesion in both forms of leukaemia

is in the bone-marrow. He points out that cases of lymphatic leukaemia have been reported (e.g., Dr. Kelly's cases) in which there has been but slight increase in the size of the lymph glands, and that there are no cases but show changes in the bone-marrow; also, that it is often impossible to draw a sharp line between cases of lymphatic and cases of myelogenous leukaemia either from the clinical or the anatomical point of view. Dr. Kelly says—"The disease, probably in all cases, results from proliferation of the bone-marrow, the blood-picture in the individual case being a mirror of the then existing marrow condition, lymphocytic and myelocytic, as the case may be. It is quite likely, however, that some of the circulating lymphocytes in lymphocytic leukaemia are formed in the lymphoid structures elsewhere in the body, such as the lymph glands, the lymph nodes, as in the intestine, the thymus, and even the so-called metastases; but that the disease of the lymph glands alone ever gives rise to leukaemia may well be doubted. The proliferation of the bone-marrow and the outpouring of the enormous numbers of leucocytes into the blood is doubtless to be referred to chemotactic influences in all cases, the lymphocytic, probably, as well as the myelocytic—that is, the disease is probably always an active leucocytosis." He suggests that the large mononuclear non-granular cells of the bone-marrow might become, under different stimuli, either large lymphocytes or myelocytes, the development in one or other of these directions being influenced by the nature of the chemotactic agent which may be at work.

SURGERY.

By JOHN PATRICK, M.A., M.B.

Treatment of Congenital Talipes Equino-varus by Removal of Centres of Ossification of Tarsal Bones.—Carl Lauenstein, Hamburg, reports in the *Centralblatt für Chirurgie* (26th September, 1903) recent experience of this operation, first suggested by Ogston. Essentially the operation consists in the removal of the ossification centres of some of the tarsal bones, so that the tarsus becomes as supple as a squeezed lemon, and the foot can be put into a normal position. The following are short notes of the cases:—

1. Boy, 6 months old: left congenital talipes. The part was rendered bloodless, an incision made from external malleolus to cuboid through soft structures and periosteum, then through cartilage of astragalus and cuboid, and the osseous centres of these bones excavated. The foot now was pliable and easily brought into good position, two silk-worm-gut stitches were inserted in the soft tissues, and an aseptic dressing applied. The heel of the foot operated on was brought into apposition with the other heel, and the point of the foot held by means of cotton-wool padding in an outward direction. The dressing was first changed four weeks later, when the wound was quite healed. Two months after operation the whole sole of the foot rested accurately on the ground. As the child was not yet able to walk, a bandage was still kept applied. A Roentgen ray picture taken eight weeks after the operation showed that the ossification centres of the astragalus and cuboid of the operated foot were almost as large as on the sound unoperated foot.

2. Girl, 1 year old: right congenital talipes equino-varus, with, as result of earlier treatment, breaking of tibia and fibula three fingerbreadths above ankle-joint. Excavation of ossified centre of astragalus and cuboid, straightening of leg bones, and correction of false position of foot, was the operation performed. No sutures were inserted, and the whole was fixed with plaster of Paris bandages. In a month the wound was healed. In two months the child put the sole of the foot completely to the ground. The Roentgen picture

showed the ossified centre of astragalus and cuboid of the right side as large as the left.

3. Boy, 2½ years old: double club foot. Hitherto treated by plaster of Paris bandages; very marked inward curvature of foot, with callosities on outer sides. Incision was made from tip of external malleolus to cuboid in both feet; in the right foot ossified centres of astragalus, cuboid, and scaphoid removed; in the left foot ossified centres of astragalus, os calcis, and cuboid removed. The feet came very easily into good position. No sutures used. The heels were fixed to one another and the feet were dragged somewhat outwards, and a pad inserted between them. The wounds healed well, and the new positions of the feet have been well maintained.

Lauenstein makes the following observations on these four operations on three cases, respectively 6 months, 12 months, and 2½ years old:—The operation is an easy one to perform; a careful Roentgen ray examination is indispensable, not only before the operation but also during the progress of the case, that the growth of the tarsal bones may be, so to speak, controlled; which centres of ossification to remove must depend on the judgment of the operator; the after-treatment is short, in eight weeks an ordinary shoe may be worn; the Roentgen pictures show very rapid reproduction of the removed bony centres, so that the supposed danger of interfering with the growth of the foot does not exist; the maximum age for the performance of the operation cannot yet be determined.

GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

An Instrument for Removing Incarcerated Pessaries from the Vagina.—Piwniczka (*Centrabl. f. Gynäk.*, 31st October, 1903) describes and figures a cutting forceps for use in breaking up a pessary which cannot be extracted whole. It has one curved or hooked hollowed blade, into which works a heavy cutting blade. It will break up any ordinary pessary, and can be used without the aid of sight in cases where the pessary cannot be exposed to view.

Enuresis and its Treatment by Epidural Injections.—Kapsammer, of Vienna (*Wiener klin. Wochenschr.*, 1903, No. 29-30, quoted in *Centrabl. f. Gynäk.*), has treated a large number of cases by this method, recommended by Catelin in 1901. The injections were always made on out-patients (*ambulatorisch*). At first he used 5 c.cm. of a one-half per cent cocaine solution, but later replaced it by a normal saline solution, which acted equally well. Out of three hundred injections there were only twice disagreeable symptoms—in one case vomiting, and, in the other, a day's headache. Generally the desired result followed a single injection, but Kapsammer recommends two or three injections at short intervals. The technique is simple. The needle should be 6 cm. long (2½ inches). It is entered between the coccygeal cornua of the sacrum, and is pushed up the sacral canal, for the whole length of the needle in adults, and the injection is made at the level of the roots of the cauda equina without penetrating the dural sac.

Vagitus Uterinus.—Braune, of Herborn (*Münchener med. Wochenschr.*, 1903, No. 21, quoted in *Centrabl.*), relates the case of a xiv-para, aged 42, in whom, at the moment of passing the hand into the uterus and of rupturing the membranes for the purpose of performing version, the author distinctly heard the child cry. The child was extracted in a condition of asphyxia, but soon cried lustily; it soon died, however, as had all the woman's children when they were not stillborn.

Albert Sippel, in Frankfurt-a-M., has an article on this subject (*Centrabl. f.*

Gynäk., 21st November, 1903), in which he begins by criticising a case related by Thorn in which crying was heard immediately on the rupture of a Barnes' bag which was blown up with air. The author had always doubted the physiological possibility of the child crying in such circumstances, and suggested that the air rushing out of the bag may have caused the torn rubber edges or some vaginal fold to vibrate sufficiently to cause the shrill sound resembling a child's cry. Lately the author had occasion to perform version in a multipara without anaesthesia. On passing his hand into the uterus he felt a contraction, and while waiting for this to pass off he heard two shrill notes coming from the inside of the woman, closely resembling the cry of a child. At the same moment he could quite distinctly feel a current of air passing along his arm downwards from the uterus, and at the same time feel a fine vibration in the sharp edge of the soft parts grasping his arm. There could be no doubt that the note was produced in the manner previously suggested. He thinks that most cases of so-called *ragitus uterinus* can be similarly explained.

On the Treatment of Gonorrhœa and Leucorrhœa with Local Applications of Yeast.—Dr. M. Plien (*Centrbl. f. Gynäk.*, 28th November, 1903) records a series of cases treated in Bröse's Klinik in Berlin. He begins by referring to the introduction of this treatment by Landau in 1899, and to the excellent, one might say unflinching, results obtained by him, as well as by Mensinga, Geret, Albert, and Abraham. These ascribe the action to various causes—to the liberation of carbonic acid, of nascent alcohol, of some special bactericide toxin, and so on, each according to his theory applying the yeast with sugar, beerwort, or asparagin. The applications are variously made, the mixture being simply painted in through a speculum, injected with a syringe, or applied on tampons or in pessaries, or even in bougies for intra-uterine medication. The results, as before stated, are recorded to have been excellent. In a few days the gonococci disappeared, and ordinary leucorrhœas dried up. Dr. Plien, however, records not merely negative results, but positively bad results, in all his cases. The cases were treated early, and with all precautions possible in the introduction of the intra-uterine bougies. In some of the cases the gonococci did, indeed, disappear from the discharges, but these continued to be purulent; and out of nine cases treated with intra-uterine bougies, seven developed acute salpingitis. The author, accordingly, cannot endorse the opinion of other observers that this form of treatment is free from danger. He has in fact abandoned it in favour of the more usual methods. He does not say that he tried simple vaginal medication with yeast.

Conservative Surgery Run Mad.—Dr. A. H. Ferguson, of Chicago, in the course of a presidential address to a medical society (*New York Med. Jour.*, 24th October, 1903), offers a short contribution of his conservative work on the ovaries and tubes of women. "There are many conditions of the ovaries demanding conservative operative procedures, such as single or multiple Graafian cysts, cysts of the corpus luteum, &c. An ovary that appears normal should not be removed though the other has to be sacrificed." He illustrates his theories by records of some cases where he carried out his conservative principles. Mrs. J. was admitted to hospital complaining of dysmenorrhœa and pains in the iliac and hypochondriac regions, only partially relieved by an earlier operation in which a portion of the right ovary was removed. On this occasion she was submitted to the following operations contemporaneously:—(1) Curetting, (2) appendectomy, (3) cholelithotomy, (4) hysterosalpingostomy, (5) salpingostomy, (6) bisection of left ovary and removal of Graafian cysts, (7) shortened ovarian ligaments. Miss B. complained of dysmenorrhœa, with pains in back, sides, and left leg. She had previously suffered from pyosalpinx, which had been drained through the vagina. She was put through these operations contemporaneously:—(1)

"Appendectomy, appeared normal externally, but it had three strictures

within" (sic), (2) trachelorrhaphy, (3) salpingectomy, right, (4) hysterosalpingostomy, (5) anterior transplantation of round ligaments. Readers will not be surprised to hear that after this conservative, we might say almost expectant, treatment, the patient left hospital in two weeks, feeling quite well. Mrs. M. also complained of dysmenorrhœa, with backache and dragging pains. In her case only ten operations were required, contemporaneously as before:—(1) Curetting, nothing found, (2) perineorrhaphy, (3) trachelorrhaphy, (4) appendectomy, (5) bisection of right ovary and removal of half the ovary and some cysts, (6) shortening of ovarian ligament for prolapse of ovary, (7) salpingostomy, right, (8) hysterosalpingostomy, (9) oöphorectomy, left, (10) anterior transplantation of round ligament. This patient left hospital in three weeks, but will evidently require a few more procedures of a similar conservative kind, as she has lumbar pains off and on.

DISEASES OF THE EAR.

By WALKER DOWNIE, M.B., F.F.P.S.G.

General Sepsis in Chronic Suppuration of the Middle Ear with a Central Perforation of the Drum. By Professor Bezold, Munich.—The following three cases, which were characterised by the development of acute general sepsis when the clinical and anatomical conditions had in no way suggested such a course, have been reported by Professor Bezold:—

The first case was that of a girl, aged 15 years, who had been under treatment at the clinic two years previously for chronic otorrhœa, with perforation of the left tympanic membrane. She was admitted to hospital on account of pain and discharge from left ear of four days' duration. Her temperature on admission was raised, and continued to rise, till on the fourth day it was 40° C., when she developed somnolence and vomiting. On the following day the antrum was opened, but, with the exception of a small yellowish-white fibrinous deposit on the posterior wall, it was normal. Five days later death occurred. At the autopsy there was found a thrombophlebitis of the left internal jugular vein, fresh emboli of pus in both lungs, fibrinous pleuritis, and some enlargement of the spleen. The drum membrane was thickened, and presented a kidney-shaped perforation in its lower half, and when the tegmen was removed the mastoid cells were found to be normal, except for some injection posteriorly. There was no pus either in the tympanic cavity or in the antrum. The rapid course of this case, with its rapid fatal termination and the disparity between the anatomical changes in the middle ear and the rapidly developing thrombophlebitis, rendered this case exceptional. It was a case of old standing, as seen from the history, the kidney-shaped perforation, &c., just such a case as is constantly looked upon as harmless.

The second case was a man of 23, who had a history of recurrent otorrhœa for eight years. Five days before admission his left ear had become painful, and there was a fetid purulent discharge. The meatus was obstructed by furuncles, his temperature was 39° C., he was drowsy and complained of headache, and there was pain on pressure over the mastoid. This was opened, and, while found to be practically free of pus, the walls were much swollen and deep red in colour, and in agar cultures made from the contents of the antrum the streptococcus pyogenes developed. The *post-mortem* diagnosis was otitis media purulenta with pachymeningitis externa purulenta circumscripta; sepsis. There was here phlebitis without thrombus formation, in addition to the acute sepsis, and it was a typical illustration of acute sepsis developing through the sinus.

The third case was a lad of 21, who had had a left middle ear suppuration at

intervals since childhood. When admitted to hospital he had had pain in the left ear for five days, and, on examination, a large perforation was seen in the anterior inferior quadrant of the left ear, through which muco-pus escaped. The mastoid process was sensitive to pressure. At the operation the soft parts were swollen, the bone contained only a few cells, and they were filled with fibrinous material and pus. The antrum, however, was free of pus, though its lining membrane was hyperemic. This patient made a good recovery, but the opening in the drum remained, and continued to discharge odourless secretion.

Professor Bezold thinks that the cause in those cases is obscure, and thinks that there was some undiscovered specific cause. They occurred in healthy individuals, and as a complication in a form of middle ear inflammation which experience has taught us to look upon as practically harmless. The infective material must have been specially virulent, or it had been present in exceptionally large quantity. The predominating organism in each of the cases was the streptococcus pyogenes.—(*Archives of Otolaryngology*, October, 1903.)

An Unusual Case of Spontaneous Bilateral Hæmorrhage from the Ear. By M. A. Goldstein, M.D., St. Louis.—The author here gives in great detail particulars of his own case, in which there was hæmorrhage from both external auditory meatuses, associated with intact membrana tympani. He also gives a synopsis of all reported cases of a similar kind. The all-important question of etiology was not definitely established in his case, although the two more common causes were clearly excluded. These causes are, first, simulation or malingery, which the author excluded after careful observations made by himself over a period of one year, and this opinion was agreed to by other competent observers; second, vicarious menstruation. In this patient, the menstrual function did not influence either the quantity or the time of the hæmorrhage from the ear.

The patient was 22 years of age, and she enjoyed perfect health till 16, when, after the extraction of a tooth followed by necrosis of the jaw, she developed an hysterical temperament.

The first time Dr. Goldstein saw the patient, she had a bloody discharge coming from both ears, with no history of injury, with no ear trouble of any kind, and without any subjective symptoms beyond a slight fullness in the head. Both auditory canals were filled with a sero-sanguineous fluid, and when this was cleared away both tympanic membranes were found intact, and there was no evidence of inflammation of either. There was no hæmophilic diathesis. The fluid was seen on several occasions to suddenly well up in the fundus of the canal, although the observer was not able at any time to locate the exact point from which the fluid entered the canal.

After every other cause had been excluded, it was diagnosed as a "neurosis," and suggestive treatment was resorted to. The patient was informed that an operation was necessary, and, after the administration of chloroform, the ear was well dried out, the canal packed lightly with a narrow strip of gauze, and the entire head enveloped in sheet wadding, and a heavy plaster of Paris bandage applied, enveloping the head and neck. At the end of forty-eight hours the bandages were removed, and the gauze in the meatus was found to be dry. At the end of six weeks there had been no recurrence of the exudation, and the hearing power was in great measure restored.—(*The Laryngoscope*, August, 1903.)

High-Frequency Currents in the Treatment of Some Forms of Deafness. By J. C. Fergusson, M.D. (*Brit. Med. Jour.*, 24th October, 1903).—In this communication, very short notes are given of five patients who, while undergoing electrical treatment, found that their hearing, which was defective, improved.

Although imperfect, these notes are of use in drawing attention to the fact that, in some cases of sclerosis of the tympanic membrane and middle ear, the use of high-frequency currents has been beneficial.

In the administration of the electricity, Dr. Fergusson used the "high-frequency" in each case, giving ten minutes in the large auto-conduction solinoid, and then five minutes of d'Arsonval's bipolar effleuve, with the brush electrodes held opposite both ears, but at such a distance as to preclude sparking.

[During the past few months I have had several such cases placed under this form of treatment. At present it would be rash to say more than that the results are encouraging.—W. D.]

PUBLIC HEALTH AND INFECTIOUS DISEASE.

By JOHN BROWNLEE, M.A., M.D.GLASG., D.P.H.CAMB.

Scarlatina and Pseudo-scarlatina (Report to the Local Government Board upon an outbreak of throat illness at Lincoln, by Dr. L. W. Darra Mair, with an appendix by Dr. W. H. B. Brooke, October, 1903).—Epidemics of scarlet fever conveyed by milk have been recorded frequently within the last thirty years. Some of these, probably the majority, have been caused by the milk becoming infected during the process of supply, either because some of the persons employed in the distribution were actually suffering from definite scarlatina, or because the latter was present in one or other of its masked forms. In several instances, the outbreaks have been associated with some inflammatory disease of the cows' udders, notably that which occurred at Hendon. In Lincoln, however, lately there was a very extensive outbreak of disease associated with a milk supply which caused considerable difficulty as regards its diagnosis. The outbreak, which began on 9th May, 1902, was practically over by 19th May. No cases occurred among those who had not partaken of the milk in some form or other. The attack-rate was, among those under 12 years of age, about 34 per cent, and of persons over 12 years of age, 23 per cent, of the total consumers of the milk in each instance. There were no cases observed where one patient was directly infected from another, the disease disappearing as quickly as it came. The incubation period, where it could be fixed, was twenty-four to thirty-six hours. The characters of the disease were in some measure different from scarlet fever. In the onset, vomiting was generally absent; the throat inflamed with great rapidity, became oedematous and of a dark red colour, with the formation of false membrane. The eruption, though often general, and then indistinguishable from that of scarlet fever, was more commonly papular in the first instance, and resembled that seen in German measles. It was usually well marked in the face. In a considerable number of cases, it seems to have been wholly absent. (This led to the disease being frequently diagnosed as diphtheria.) The tongue was soft, flabby, and furred, and is said never to have presented the strawberry appearance characteristic of scarlet fever. The temperature was high at commencement, but usually fell on the second day of illness with the appearance of the eruption; in uncomplicated cases, reaching 100° F., or normal by the third day, even although the rash was profuse. The pulse was never rapid to the extent which is usual in scarlatina, being rarely over 102, and, even in one case where the temperature reached 104·2° F., the pulse-rate was only 112. Desquamation occurred, beginning usually as the eruption disappeared. In general, it was furfuraceous, but in some cases the cuticle peeled in large flakes, as is commonly seen in cases of scarlatina. The urine rarely contained albumen, though twice in the fifth week albuminuria and hæmaturia occurred. Two complications very unusual in scarlet fever were fairly common. One of these was an inflammation of the anterior chain of cervical lymphatic glands, extending sometimes to the clavicular glands. This was associated with swelling and exquisite tenderness, and usually a rise of

temperature (102° to 104°). The other was gastric irritability, passing, in some cases, to gastritis, and in one to fatal peritonitis. Septic phlebitis was met with in one case, which terminated fatally, with pyæmia. Otitis media was also noted once. Rheumatic symptoms were apparently frequent, but the description is not sufficient to determine how far they differ from the arthritis of scarlet fever. As regards the etiology, a yeast capable of killing rodents with cedematous swelling of the throat and thrombosis of the venous system, was isolated by Dr. Klein from the throat secretions in three cases. In these, the same yeast was found—in one of them in "pure culture." The outbreak of the disease was associated with the return of the cows to out-door pasture in a meadow in which the grass was affected with some form of "rust," and, as none of the cows showed any signs of disease, either constitutional or confined to their udders, it is surmised as a possibility that the disease of the grass may bear some etiological relationship to the outbreak in question.

In May, 1903, a second outbreak of disease associated with another dairy occurred in Lincoln. There is a general consensus of opinion among the medical men, however, that this was scarlatina, and it is interesting to remark that two of the cows from which the milk was obtained were suffering from a vesicular affection of their udders, thus bringing this outbreak into relationship with the celebrated one at Hendon. The yeast above referred to was not obtained on cultivation of the throat secretions.

DENTAL SCIENCE.

By W. D. ANDERSON, L.D.S., F.F.P.S.G.

The Use of Arsenious Acid for the Destruction of Exposed Pulps (Editorial, *Dental Cosmos*, October, 1903).—In this article, a somewhat alarmist opinion is given as to the use of arsenious acid for the destruction of exposed pulps. It even goes so far as to state that, on account of the cases of loss of individual teeth with subsequent necrosis which have recently been brought to their notice, such a dangerous mode of treatment should be avoided.

A short summary of the general features of several cases is then given. Arsenic is applied, and then removed later. The pulp is not extirpated, but sealed up with some mummifying paste containing strong antiseptics. After an interval of three weeks or so, the patient returns complaining of pain of a dull, throbbing character, and tumefaction of the tissues around the affected tooth. In two cases, the tooth became so loose that it was removed readily by the patient's own fingers, and in one case the irritation in the deep tissues was a constant source of irritation for weeks after tooth was exfoliated.

The cause of the irritation is given as experimentally proved. The arsenic is absorbed by the proteid elements of the pulp forming a weak chemical combination with them. These compounds subsequently break up, the arsenic being set free. This latter then penetrates the root, and later the pericementum, an arsenical necrosis following.

The article then goes on to say that, instead of using arsenic, we should employ the more direct means at our disposal, viz., immediate extirpation with cocaine anæsthesia.

Commenting on this article, one feels that the editor has had cases brought before his notice where arsenic has been used not wisely but too well; and we would at once agree with him when he says it is a dangerous agent unless used with intelligence and caution. But there is no reason why it should not be so used, and if this be done, special care being given to its being thoroughly sealed up in the cavity, there should be no reason for such an alarmist article. True, a certain percentage of cases of periodontitis are met with, but even

with immediate extirpation we are not free from these, and, in our experience, the latter cases seem to predominate.

Again, in regard to the cases quoted, he thinks that the irritating action of strong antiseptics, such as formaldehyde, can be overlooked, because other antiseptic and mummifying pastes have given like results. All mummifying pastes, however, contain strong antiseptics (*e.g.*, thymol), and if these be used too freely, irritation is almost certain to supervene.

Dental Anæsthesia. By Dr. Thresing Bonn (*Deutsche Monatsschrift für Zahnheilkunde*).—The *Dental Cosmos* gives a summary of this paper. The author finds that ammonia solutions have a marked effect in producing dental anæsthesia, this anæsthesia lasting from a few hours to a few days. The solutions do not discolour the tooth or irritate the pulp. The best results are got with ammonium acetate and ammonium carbonate. The first produces anæsthesia in about five minutes, but gives considerable pain for a few seconds after introduction. The second one, in solutions of 5 to 20 per cent, produces complete anæsthesia in five to ten minutes, with no pain on introduction—hence it is preferred.

Books, Pamphlets, &c., Received.

- The Practical Study of Malaria and other Blood Parasites, by J. W. W. Stephens, M.D., and S. R. Christophers, M.B. London: Longmans, Green & Co. 1903. (10s. net.)
- Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Twentieth Annual Issue. London: Charles Griffin & Co. 1903.
- The Examination of the Urine, by J. K. Watson, M.D. Edin. London: The Scientific Press, Limited.
- The Prevention of Consumption, by Alfred Hillier, M.D., C.M., B.A. Revised by Professor R. Koch. With Illustrations. London: Longmans, Green & Co. 1903. (5s. net.)
- Diseases of the Nose and Throat, by Charles Hunteen Knight, A.M., M.D. 147 Illustrations. London: Rebman, Limited. 1903. (6s. net.)
- A Manual for Students of Massage, by Mary Anne Ellison. Second Edition, Revised by Gulielma Manley. London: Baillière, Tindall & Cox. 1904. (3s. 6d.)
- The Nutrition of the Infant, by Ralph Vincent, M.D. London: Baillière, Tindall & Cox. 1904. (10s. 6d. net.)
- An Atlas of Human Anatomy for Students and Physicians, by Carl Toldt, M.D., assisted by Professor Alois Dalla Rosa, M.D. Translated from the Third German Edition, and adapted to English and American and International Terminology, by M. Eden Paul, M.D. Brux., M.R.C.S., L.R.C.P. Second Section. C. Arthrology (Figures 378 to 487 and Index). London: Rebman, Limited. 1903. (6s. net.)
- Archives of the Middlesex Hospital. Vol. I. London: Macmillan & Co. 1903.

- Reports of the Society for the Study of Disease in Children.** Volume III. Session of 1902-1903. Edited by George Carpenter, M.D. London: J. & A. Churchill. (12s. 6d.)
- The Physiognomy of Mental Diseases and Degeneracy**, by James Shaw, M.D. Bristol: John Wright & Co. 1903. (3s. net.)
- A Pocket-Book of Clinical Methods**, by Chas. H. Melland, M.D., M.R.C.P. Bristol: John Wright & Co. 1903. (1s. 6d. net.)
- A Text-Book of Diseases of Women**, by Barton Cooke Hirst, M.D., with 655 Illustrations, many of them in Colours. London: W. B. Saunders & Co. 1903. (21s. net.)
- A Text-Book of the Practice of Medicine**, by James M. Anders, M.D., Ph.D., LL.D. Illustrated. Sixth Edition, Thoroughly Revised. London: W. B. Saunders & Co. 1903. (24s. net.)
- Nervous and Mental Diseases**, by Archibald Church, M.D., and Frederick Peterson, M.D. With 338 Illustrations. Fourth Edition, Thoroughly Revised. London: W. B. Saunders & Co. 1903. (21s. net.)
- Modern Surgery, General and Operative**, by John Chalmers Da Costa, M.D. Fourth Edition, Rewritten and Enlarged, with 707 Illustrations, some of them in Colours. London: W. B. Saunders & Co. 1903. (21s. net.)
- The Four Epochs of Woman's Life: A Study in Hygiene**, by Anna M. Galbraith, M.D. With an Introductory Note by John H. Musser, M.D. Second Edition, Revised and Enlarged. London: W. B. Saunders & Co. 1903. (6s. 6d. net.)
- A Text-Book of Surgery for Practitioners and Students**, Edited by William W. Keen, M.D., LL.D., F.R.C.S.(Hon.), and J. William White, M.D., Ph.D. Fourth Edition, Thoroughly Revised and Enlarged. 2 Vols. London: W. B. Saunders & Co. 1903. (30s. net.)
- A Text Book of Pathology**, by Alfred Stengel, M.D. With 394 Illustrations in the Text, many of them in Colours, and 7 Full-Page Chromolithographic Plates. Fourth Edition, Thoroughly Revised. London: W. B. Saunders & Co. 1903. (21s. net.)
- Practical Physiological Chemistry**, by J. A. Milroy, M.A., M.D., and T. H. Milroy, M.D., B.Sc., F.R.S.E. Edinburgh: William Green & Sons. 1904.
- Transactions of the Twenty-Fifth Annual Meeting of the American Laryngological Association** held at Washington, D.C. New York: Published by the Association. 1903.
- Asthma in Relation to the Nose**, with Notes of 402 Cases, by Alexander Francis, M.B. London: Adlard & Son. 1903. (5s. net.)
- Clinical Treatises on the Pathology and Therapy of Disorders of Metabolism and Nutrition**, by Professor Dr. Carl von Noorden. Part IV: The Acid Autointoxications, by Professor Dr. Carl von Noorden and Dr. Mohr. New York: E. B. Treat & Co. 1903. (50 cents.)

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FOUR WEEKS ENDING 19TH DECEMBER, 1903.**

	WEEK ENDING			
	Nov. 28.	Dec. 5.	Dec. 12.	Dec. 19.
Mean temperature, . . .	46·0°	39·0°	43·6°	37·0°
Mean range of temperature between day and night, .	18·6°	11·4°	8·4°	9·5°
Number of days on which rain fell, ...	7	3	7	3
Amount of rainfall, . . ins.	1·09	0·99	0·72	0·35
Deaths registered, . . .	315	324	391	346
Death-rates, ...	20·8	21·4	25·8	22·9
Zymotic death-rates, . .	3·0	2·4	3·7	3·4
Pulmonary death-rates, .	6·5	7·1	7·8	7·3
DEATHS—				
Under 1 year, ...	89	80	96	82
60 years and upwards, .	56	59	71	63
DEATHS FROM—				
Small-pox, ...	3	2	1	2
Measles, ...	17	22	34	30
Scarlet fever, ...	1	1	5	2
Diphtheria, ...	2	2	2	...
Whooping-cough, ...	7	3	5	4
Fever, ...	3	2	...	2
Diarrhœa, ...	12	4	9	10
Croup and laryngitis, . .	1	1	1	...
Bronchitis, pneumonia, and pleurisy, ...	84	81	107	92
CASES REPORTED—				
Small-pox, ...	20	26	28	64
Diphtheria and membranous croup, ...	22	16	10	16
Erysipelas, ...	14	17	23	27
Scarlet fever, ...	24	38	39	27
Typhus fever, ...	...	...	...	...
Enteric fever, ...	16	9	6	9
Continued fever, ...	...	...	1	...
Puerperal fever, ...	2	1	3	1
Measles,*	545	613	683	565

* Measles not notifiable.

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ORIGINAL ARTICLES.

THE EXTERNAL AND INTERNAL USE OF
NORMAL SALINE.

By W. D'OYLY GRANGE, M.D., HARROGATE.

PHYSIOLOGISTS long ago demonstrated to us the very marked physiological difference which exists between plain water and water which contains 0·6 per cent of chloride of sodium. They have shown us that if a piece of living tissue be placed in plain water, it is rapidly acted upon and its integrity destroyed; whereas, if placed in 0·6 per cent solution of chloride of sodium, which they call "normal saline," it may be examined under the microscope as living tissue. It is remarkable how long it was before the importance of this was recognised apart from the original application of the discovery to microscopical work. Its very simplicity probably obscured the value of the observation. It was long before any practical use for this simply-constructed fluid was found, but now, as is well known, it is largely employed for intravenous and interstitial injection, because it is not inimical to living tissues, but almost, indeed, normal to them, and therefore capable of being rapidly absorbed; but the full extent of its value in the domain of medicine is not yet recognised, or, if admitted, the value is attributed to other causes. The great difference

between ordinary hot-water baths and those from medicinal springs has long been known. For instance, in the treatment of diseases of the skin, plain water has been looked upon, and rightly so, as injurious to most affections, and particularly to eczema, though the fact that skin affected by this very disease may advantageously be bathed frequently with normal saline has not been recognised, except in so far that those springs which most nearly approach in their constitution a normal saline are those which have been found most beneficial in the treatment of these skin affections. The result has generally been attributed to other ingredients, which probably have little to do with it. On reflection, we can readily believe that the sum total of the action of water upon our small piece of tissue, as shown under the microscope, must be a considerable sum total when applied to a large surface of skin denuded of its protecting epithelial layer; and we can at once see that cells which are hanging between life and death may have the balance turned against them by plain water. No part of our tissues contains plain water; our skin is protected against its action by the water-resisting excretion of the sebaceous glands. Normal saline is present very generally, as we know, in our bodies. If a further illustration of the enormous difference between plain water and normal saline be required, let anyone employ the nasal douche with, first, the saline solution, and then with plain water. When a bath of plain water is taken by a person whose epidermis is healthy and intact, what is the result? The surface of the skin, even when in its normal condition, is covered by epidermis which is in the process of being shed, and is in the various stages ranging from complete vitality to complete necrosis; that part of it which is in the intermediate stage has the process of necrosis completed for it by plain water, a result which to the strong is of probably little consequence, but to the weak or old means a certain amount of shock, which, when repeated daily, produces an appreciable result. Now, if for plain water we substitute a fluid which is almost normal to the tissues, we gain all the beneficial results of prolonged application of moist and heat and the cleansing effect, whilst we do away with any irritation, and, indeed, substitute a fluid which is nothing but soothing.

This, I believe, to be a partial and simple explanation of the good produced by mineral water bathing, and of the value of sea-bathing, where, in addition, the skin is stimulated by an excess of salt. Children and old people are particularly liable to the shock of bathing in plain water, and are frequently

ordered salt-water baths, and do not suffer the same amount of shock from bathing in this normal saline plus the excess of salt. The benefit derived is generally attributed to the positive action of the sea-salt, whereas it is really due in a great measure to what we may call a negative effect. The water itself, on account of the addition of salt, is not corrosive, though, of course, there is a stimulating effect substituted.

People who suffer from an irritable condition of the skin of the face will be well advised to wash the face with normal saline instead of plain water. If soap is required, the better plan is to wash the face at night, so that time is allowed for the secretion from the sebaceous glands to form a protecting layer before the face is exposed to cold weather. Dr. Alfred Hillier informs me that washing the face during the day has to be avoided as far as possible in South Africa on account of the action of the sun and dry air upon the skin robbed of its protecting layer of sebaceous secretion. As I have said before, the secretions of the body are saline; were our tears other than saline, we should shed them with more reluctance. Were urine but plain water, micturition would cease to be "one of the few innocent amusements of life." This suggests to us that, when we wish to administer intra-urethral injections, we ought to use normal saline, if it is not incompatible with the medication we employ.

The rapidity of the absorption of normal saline makes all the difference between the drinking in the early morning of a large quantity of plain water and the same quantity of water rendered slightly saline. The plain water is not so quickly absorbed, and will therefore frequently act as an aperient. The slightly saline water is more easily absorbed into the blood, and is not an aperient, but may have a constipating effect by acting upon the kidneys. The rapidity of absorption of normal saline was noticed long ago by the older writers who treated of the action of the Moffat waters and other springs, which contain just about the amount of salt to make them normal saline waters. It is the rapidity with which these normal saline waters are absorbed which causes the giddiness so frequently noticed. The strong sulphur water of Harrogate contains a large quantity of chloride of sodium, and therefore is not readily absorbed; in fact, it induces a flow of fluid into the intestines, and so acts as an aperient. Next to chloride of sodium, sulphur seems to be one of the chief necessities of the body, and so these mineral waters supply the three great factors for promoting metabolism, namely, water, salt, and sulphur. I am often surprised to find

patients sent to Harrogate, who leave home at great inconvenience, and upon whom the action of not even one of these three great factors has been tried. Of course, I do not underrate the benefit of the fine moorland air and of the rest and change, nor the difficulty of getting people to continue at home a line of treatment which they willingly follow at a spa, when they find everyone else doing the same. The treatment at Harrogate generally is also to give at about eleven o'clock a large tumbler of water, the saline constituents of which little, if at all, exceed those of normal saline. This water is quickly absorbed, and thus restores to the tissues fluid of which they are apt to be in need after the depletion by the stronger water taken earlier in the morning. One of the most markedly successful results from treatment of post-scarlatinal convulsions that I have observed, was obtained in a child where the stomach would retain nothing, by inducing free diaphoresis by packing, and at the same time administering large enemata of water. Had I the same case to treat now, I should use intravenous or interstitial injection of normal saline, which would do away with the risk from absorption of the intestinal toxins. The drinking of hot normal saline the first thing in the morning is, I believe, a very valuable means of combating the tendency to uricæmia. The saline is rapidly absorbed, increases the action of the kidneys, and is altogether a fluid which is normal to the physiological action of the liver. One of the errors in diet frequently to be corrected in our patients is the partaking of a cup of tea early in the morning, and a method of helping them to obedience, without entirely robbing them of some stimulant, is to order a tumbler of normal saline instead. This certainly is a poor substitute, from an epicurean point of view, but from a physiological standpoint it is a very beneficial one; for, though the saline has no stimulating effect upon the nervous system, it certainly helps to pull a feeble person together, the chloride of sodium having a mildly stimulating effect upon the heart. The appetite for breakfast is not so likely to be impaired by this draught as it is by tea. Normal saline is not unpleasant to drink, if the mistake is avoided of adding too much salt.

The value of bathing in sea-water is, I think, not fully appreciated, or there would be more places on our coasts where hot or tepid sea-water baths might be had.

The uses of normal saline, when its value is recognised, will be found to be numerous. A few of these uses have, of course, already been appreciated, but it is, I think, beneficial for many purposes to which it has not as yet been applied. It is many

years since Mr. Rutherford Morison, of Newcastle-on-Tyne, advocated the use of normal saline for flushing the peritoneum in abdominal surgery, and his example was followed by the majority of surgeons, and should be by all. The washing of a wound is best carried out by sterilised water rendered slightly saline; in the absence of an anæsthetic, it has the advantage of being less painful. The morning bath for many people will be found to cause less shock if about three tumblerfuls of kitchen salt be added to the ordinary immersion bath, or a cupful to the ordinary bedroom sitzbath. People who set great value upon their complexions ought to bathe their faces in normal saline in preference to plain water; those who suffer from an irritable skin should, indeed, use nothing else; and chapped hands in winter will heal more readily if only cleansed by soaking them in warm normal saline. I think that you will find that, in many rheumatic cases or other conditions where it is desirable to produce a free action of the skin, you may best attain this result by hot baths containing at least enough salt to convert the water into normal saline. Where the skin is intact there is no harm in having an excess of salt, but where there is any disease of the skin or abrasion of its surface, the proportion of 0·6 per cent is the best, always remembering that a slight excess is less injurious than a bath which is weaker in salt than 0·6 per cent. The cry of the patient suffering from eczema is for a bath, and this you may give him with no fear of doing harm, and probably with a beneficial result, if you make it normal saline, to which you may add such medicament as you would consider would do good when applied in the form of ointment or salves. Hot baths of any kind ought to be preceded by a free purgation of the bowels, and if some sulphur be given at night, followed by a saline draught in the morning and a large tumbler of normal saline or Seltzer water at noon, you will roughly approximate the treatment at Harrogate in such cases.

For rheumatism with an intact skin the bath ought, of course, to be hot, say from 99° to 105°, but for cases of skin disease it ought not to exceed the temperature of the body. The cold bath administered for reducing the temperature in typhoid fever ought always to be of cold normal saline, for I am certain that this quality reduces the shock to the system, and in this case an excess of salt can do no harm. We find that people who up to mid-life have been in the habit of taking a cold bath in the morning, begin to complain that they do not react quite so well. If there are no particular circulatory disturbances to account for this, they may, by the addition of

a little ordinary kitchen salt to their bath, continue the practice for some years longer, particularly if the state of the bowels be attended to.

Baths of warm saline will be found most useful in the treatment of a variety of skin diseases, and particularly so of psoriasis. The bath may be also medicated by various remedies, but its basis should be normal saline. Hydropathic establishments, which can provide massage-douching with diluted sea-water, ought to become popular resorts with patients suffering from rheumatism. Whenever prolonged hot immersion baths are given for rheumatism, &c., the water ought to be rendered saline, so that the effect may be as soothing as possible. The Harrogate Corporation have, at my instigation, added to their numerous baths brine-baths—the brine, similar to that at Droitwich, is imported from Middlesboro’—and they have proved very useful.

Gynæcologists use largely douches of hot water. Now, on very little consideration, I think anyone will appreciate how much more soothing to the mucous membrane is a prolonged douche of hot sterile normal saline. It is a very simple procedure to have a jug of cold saline which has been boiled, and one of boiling saline, so that the required temperature may be attained. Every quart of water requires the addition of about 90 grs. of salt. There are some forms of sterility which undoubtedly yield to a course of douching with hot normal saline. The condition of the mucous membrane of the vagina is rendered more healthy, and the saline solution is one in which the spermatozoa live, whereas plain water kills them. I have had some excellent results from this treatment.

NOTES ON AMERICAN HOSPITALS.

By CAMPBELL DOUGLAS, L.R.C.P.E.

“Hear now a song—a song of broken interludes—
A song of little cunning; of a singer nothing worth.
Through the naked words and mean
May ye see the truth between

As the singer knew and touched it in the ends of all the earth.”

—KIPLING.

RECENTLY it was the good fortune of the writer of this article to spend some six weeks visiting American hospitals, and learning at first hand something of the way in which his

American medical brethren did their work. Some impressions of the men whom he met, and of the work which he saw carried out, are here recorded. As six weeks' acquaintance with anything is hardly enough to enable one to pass judgment upon it, so these notes of a holiday trip do not pretend to give more than a general impression left by a flying visit across a continent—the composite picture formed from a score or two of individual films. If anything I say should hurt the susceptibilities of my American friends, I crave their indulgence, and assure them that I shall try to be honest in my criticism, and record nothing which I have not seen, and repeat nothing which I have not heard directly. For them all I have a high regard, and some of them I should feel honoured to count among my personal friends. If it is given to me to again visit the United States, I shall seek with great pleasure to renew acquaintanceship with not a few of them.

A few weeks or months spent in the workshops of our American colleagues will probably do more than anything else to teach one that all the wisdom of the world is not contained in one's *Alma Mater*, and at the same time are apt to make one an enthusiast for that British-American friendship whose growth has been so remarkable within the past two decades. In no section of society can the increase of this friendly feeling be stimulated more than in that which embraces the medical profession, whose only aims are mutual, and never antagonistic; whose object is the demonstration of scientific truth, not the piling up of fortunes; and whose goal is the conquest of disease, not the conquest of each other. Nothing will help on the growth of this friendliness more than travel in each other's country, and it is probable that there has been too little of this in the past. Cheaper rates and quicker transit are gradually leading towards the time when we will discuss the advisability of going for our short vacation, not to the Isle of Man or across to Holland, but to Hot Springs or San Catalina.

A writer in an American medical magazine recently confessed that he thought the best time to take a foreign trip, which would include the study of foreign hospital methods, would be after fifteen or twenty years of hard general work, when one was fagged and in need of a rest, and when one was able by one's own work to appreciate the value of another's. From this view I would dissent for two reasons—first, because a man who has never been much away from a general practice for fifteen years ought to go back to college—his own college—and stay there all the time, if he wants any sort of brushing

up ; and, second, because if one intends seeing much of foreign hospitals, and has only a limited amount of time, he ought to be fresh enough to "hustle round" without feeling fagged all the time. The man fresh from active hospital work in the home country, be he visiting surgeon or interne, is in a better position to compare home methods with foreign ones, and will at the same time learn more from and notice more of what he sees. It is true, of course, that the Atlantic trip, which is the preliminary to every holiday in America, braces one up, and takes all fag out of one, making in itself the pleasantest of holidays ; and when the time comes when we are able to take a week-end in New York, we shall probably look back with regret to the days when it took a week to cross, and when one didn't have the previous day's news served up at the breakfast table every morning by wireless telegraphy. The best time of the year to visit the States is not July or August, when we usually take our holidays, for the chances are that the leaders in the surgical and medical world in America are on holiday too. Thus Osler, Halstead, and Kelly leave the Johns Hopkins for Europe or elsewhere as soon as the students' session closes in May, and a visit to Baltimore while they are gone is apt to be a little disappointing. Probably May or late autumn, or any time that the students' session is in full swing, would be the time to go across. One does not exactly wish to go round with the house-physician while the professor is rusticating amongst the hills, or watch the house-surgeon carve while his chief is "back East."

In a note to the writer, wishing him a pleasant trip and the acquisition of fresh knowledge, Sir William Macewen remarked that one was always sure of a welcome in American hospitals at any time ; and though this is literally true, yet one is none the worse of having one or two introductory cards to some of the more prominent men in foreign hospitals, and I would take this opportunity of thanking those who so willingly obliged me in this respect, and through whose kindness I was enabled to gain a closer insight into American hospital ways than I might otherwise have done. One could not help being gratified at the cordial spirit of freemasonry which existed among the medical fraternity of the United States, a spirit of brotherhood which made the presentation of one's card change the sharp scientific business man into the eager delighted friend, who could not do enough to make your stay both pleasant and profitable, and who sent you on your way with mutual regrets that you had to part, and with little personal notes of introduction to confrères in distant cities. This is one

of the most lasting impressions which I have taken away with me.

It might seem at first that there was little difference between American hospital methods and our own, except in minor details; yet, on closer inspection, many and fundamental differences can be found affecting their hospital buildings, the financing of their institutions, the admission of patients, their ambulance system, and numerous other things. The way in which their ambulance system is operated differs considerably from our own. Each hospital has its own ambulances, and with these drains a certain district of the city. When an accident occurs in a particular district, a policeman will, from the nearest telephone, ring up whichever hospital happens to be nearest the scene of the accident, and in a few minutes an ambulance is on the spot. Each of these ambulances, moreover, when it goes out, is accompanied by an assistant house-surgeon, who is for the time being on ambulance duty, so that the patient gets into skilled hands at once, and there is little chance of anyone dying of hæmorrhage or some such preventable cause while on the way to hospital. In Bellvue Hospital, New York, I saw an ambulance standing outside the stable, horsed, and ready for any call that might turn up. The moment a call sounds in the stable, the ambulance dashes round to the exit gate, where the interne on ambulance duty at the time is already waiting, bag in hand. He jumps in, shouts the location of the case to the driver, and in a moment they are on their way to the scene of action. If the case be a trivial one, it may be treated and sent home, or driven home right away, or it may be taken to the hospital for temporary or prolonged detention. By such a system cases are more quickly reached, and more quickly taken in hand, though the system is more applicable to large cities than to small towns. The following incidents serve well to illustrate the value of a medical man going with the ambulance:—A call from the other side of the island came to Bellvue one afternoon during a spell of very hot weather. The doctor found on his arrival that the patient was a man overcome by heat, and with a temperature of 109° F. The application of an ice-cap to the head, and sponging the man's body with ice-water all the way to hospital, brought his temperature more nearly to normal, and probably saved his life. On another occasion a hurried call came to the New York Hospital from a few blocks away, and when the ambulance reached the spot, some five minutes later, the house-surgeon, whom I had the pleasure of meeting, and who was a very smart man indeed, found a boy who had

been run over by a motor-car, and was very blanched and shocked. Making a provisional diagnosis of internal hæmorrhage of a serious character, he picked the boy up in his arms, and drove to the hospital as fast as his horse could gallop. On reaching it, he went at once, with the boy still in his arms, to the theatre, where Dr. Lewis Stimson was at the time finishing an operation, and, without waiting for preparation of any kind, the abdomen was opened, and a spouting superior mesenteric artery quickly caught with forceps.

To become a house-surgeon or house-physician in almost any American hospital, one has to pass a competitive examination, and for the appointments in the larger hospitals there is keen competition. As with us, the men who have done best work as undergraduates generally get in. The length of service varies greatly in different hospitals, but is longer than with us as a whole. A man may enter a hospital, and stay in it for a year or two years or longer, but during this time he may not be more than two or three months in any one set of wards, or under one chief. Thus, in the Roxburgh Hospital in Wissa-hickon, the housemen spent three months on the medical side, three months on the surgical side, and three months in the laboratory, doing all the chemical, bacteriological, and pathological work of the hospital. This is certainly a disadvantage from the visiting surgeon's or physician's point of view. In other hospitals the same thing occurred, though perhaps an extra month might be spent in each department. In any case, the men must go through the various branches of hospital work in one continuous service, and cannot, as is frequently done with us, break off for six months or a year, and then return for a fresh turn as interne. In some of the larger hospitals, such as the Johns Hopkins and the New York Hospital, the term of service is longer than elsewhere, and the men are kept more strictly to one side of hospital work—medical, surgical, or gynæcological. Thus, in the latter hospital there are two surgical divisions, each with four internes, and the work of the two divisions is kept separate. During the first six months the interne anæsthetises; during his second six months he assists at operations; his third half year is spent on ambulance duty or in taking instruments; and during his final period of six months or more he has charge of the surgical wards, admits cases, acts as first assistant when his chief is operating, and very frequently operates himself. Both the house-surgeons in this hospital (the senior man in each division is alone called house-surgeon) had done many laparotomies for pyosalpinx, appendicitis,

hernia, &c., nor were they alone in this respect, for I found the same thing to occur at the Cook County Hospital in Chicago, and saw several operations by house-surgeons in the Johns Hopkins Hospital. Whether all this was right from the patient's point of view, I leave others to decide. By the time their term is finished, however, the house-surgeons' knowledge of operative technique is considerable, and as one of them said, they are "ready to tackle anything." In the Johns Hopkins Hospital the offices of resident physician, surgeon, and gynecologist are more or less permanent (that is, the man appointed can remain in the position for years if he cares to), and a small salary is paid. Those under them are termed house-officers, are elected for a year, and are eligible for re-election. That many of these junior men never reach the senior posts is evident, when one learns that there have been but three house-physicians in the past fourteen years, the present occupant, Dr. McCrae, having been there some three or four years, and his predecessor, Dr. Thayer, nearly seven years. These housemen take an active part under the direction of their chiefs in the teaching work of the hospital. In operating they were assisted by their juniors, who treated them for the time being almost like chiefs. Most of the internes whom I met impressed me with their smartness and fitness for work, and seemed to take a pretty keen interest in doing their work well. Yet, in one big hospital in New York, I saw three housemen fail to recognise surgical emphysema following tracheotomy. Others, again, knew few men or books outside their own university or city. In their social relations, when they were off duty as it were, they proved always to be the best of good fellows, and I have passed many a pleasant hour in their company on the tennis court, or at the dinner table, or in the snug sanctum of some senior resident, chatting and comparing notes. I do not know that the Bohemian hilarity of the Scottish hospital symposium is ever indulged in, but they can enjoy themselves too, when they get together of an evening, with music, and song, and story. Their rooms were more than up to our own as regards size and furnishing, although in some hospitals two men shared each bedroom; and in the Philadelphia Infirmary three men slept in one room, and had, of course, a common sitting-room and dining-room. The "cuisine" was always excellent. In the Episcopal Hospital in Philadelphia, the dinner-table is provided for out of a fund left for that special purpose by a former resident. Here is a most practical suggestion for "old residents."

America is a new country in many respects, and among

others in the matter of hospital buildings. Most of the hospitals are smaller than ours, averaging three to four hundred beds, though the State hospitals, where the very poor, chronics, fever cases, and sometimes insane patients are received, may reach a huge size, as in the case of the Philadelphia Hospital, which has five thousand beds, and the Bellvue, and Cook County Hospital, Chicago, both of which are of great size. Most of the general hospitals are comparatively new, up-to-date buildings, often planted in the centre of the town, with very little ground around them for convalescents to exercise in. The plan of building in the majority of them is to have pavilions or blocks, three or four storeys in height, and connected by corridors. Some of them have excellent situations as regards air and sunlight, particularly St. Luke's Hospital in New York, built on the summit of Cathedral Heights, on the outskirts of the city; the Pennsylvania Hospital, in the suburbs of one of the most beautiful cities in America; and the Johns Hopkins Hospital, situated on the top of a hill, well above the smoke and dust of Baltimore. The average number of beds in each of these is about three hundred. The larger and better hospitals are very frequently denominational, that is, are kept up and supported by members and adherents of certain religious and other organisations. The Mt. Sinai Hospital in New York, kept up by the Jews; the Providence Hospital in Washington, maintained by the Catholics; and the French Hospital in San Francisco, supported by the French society of the city, are examples. The wards in nearly all are large and wide and airy, with plenty of cubic space to each bed, the average number of the latter varying from twenty or twenty-five in the general hospitals, up to forty or fifty in the State hospitals, with their closely-packed, low-roofed wards. In one hospital an idea in flooring with different coloured tiles had been carried out, with very pleasant effect, but in most, the floors of the wards were of polished wood. On the other hand, nearly all the corridors, entrance halls, and theatre floors were formed of small pieces of marble, embedded in concrete, forming a mosaic pattern. The three hundred odd beds, which constituted the average hospital, were not, however, free beds for charity patients. Perhaps a fourth, or a third part of them, might be in private wards of two or three beds, or in private rooms of one bed. Thus all the hospitals, except the State hospitals, receive paying patients, and the system of nursing homes, unconnected with any hospital, for the treatment of

those able to pay, is quite unknown. In the Providence Hospital in Washington, I saw some very beautiful private suites, where the patient had a private bathroom attached to the bedroom, and an extra room for any relative who desired to remain near the patient during his illness. Senior students are admitted to the private operations, and the patients are under the care of the house-surgeon or house-physician.

Great attention has been paid to the operating suite in most American hospitals, and its newness and first-class equipment are very apparent. Frequently the operating block is by itself, attached to the end of the surgical pavilion, the suites for the different floors being placed on top of one another. The operating-room is at one side, the sterilising-room, surgeons' dressing-room, instrument-room, etherising-room, and surgeons' bathroom opening off an ante-room on the other side. The favourite material for the walls and doors of the theatre, and the siderooms connected with it, is solid blocks of marble. Each door may be cut from a single piece of nearly white marble, swung on very heavy brass hinges. While the amphitheatre where operations were performed before the class was often large enough to accommodate five or six hundred students, the private operating-rooms might be just large enough to serve the surgeon and his assistants. As showing the cost which these marble theatres entail, I was assured that the large marble operating-theatre of the Medico-Chirurgical Hospital in Philadelphia (they call it "Medico-chi." for short) was built at a cost of two hundred thousand dollars (£40,000). It certainly was the most magnificent operating-theatre I had seen anywhere. When the surgeon enters the dressing-room, he divests himself of all his clothing save his undershirt and socks, and proceeds to don a sterilised suit of duck or cotton cloth, and a sterile, closely-fitting skullcap. Then he sterilises his hands, and, lastly, puts on a sterilised gown and sterilised rubber gloves; and has his moustache and beard, if he has either, covered in by a bag or a turn of bandage over the vertex and under the chin. He has goloshes or sandshoes on his feet. This was quite a common method of preparation for operation, and was the one adopted by Lilienthal in New York, by Deaver in Philadelphia, and by Murphy in Chicago. The assistants follow the chiefs' example in every detail. Though bathrooms with shower, and spray, and plunge were attached to several of the theatres, I do not know that they were often used, but sometimes the surgeon had a bath to cool himself after a tedious operation. I will

always remember standing for nearly four hours one afternoon in the New York Hospital theatre, watching several difficult and prolonged abdominal sections being performed by Dr. Hartley, while the thermometer indicated a temperature of 97° F. in the shade. I felt like joining the house-surgeons in the cold shower which some of them took before we went down to dinner.

While the surgeon is sterilising his hands and donning his operating clothes, the patient is being anæsthetised in an adjoining room. In almost every hospital in the United States the patient is first put under with nitrous oxide gas, and the anæsthesia is kept up with ether. The Bentley inhaler, which could be used for both gas and vapour without removing the mask from the patient's face, was the favourite instrument in New York, but elsewhere the cone-shaped towel was generally used for ether administration. Amongst the many administrations which I witnessed in different cities, from New York to San Francisco, I never saw a single alarm given, or artificial respiration resorted to. I have seen ether given badly, yet without seeing any evil result to the patient, and seldom was there any retching or vomiting. The usefulness and safety of ether as an anæsthetic agent was one of the things which impressed me most during my stay in the country. Most American surgeons maintain that the supposed bad results in bronchial and renal cases are greatly exaggerated. I seldom saw chloroform given, and never saw it given well. The administrator is generally the junior interne, students seldom being allowed to give an anæsthetic before graduation. Before leaving the subject of anæsthesia, I should like to mention the method of operating under spinal cocainisation, which I saw practised by Dr. Morton, of San Francisco. Though he had no operations to do on the morning that I visited his hospital, he was kind enough to arrange a circumcision there and then, so as to demonstrate the practical working of the method he has been using for some years. Dr. Morton has performed, under the subarachnoid injection of cocaine or tropacocaine (Merck), more than a thousand operations, without pain and with little shock, and these included such major operations as 63 abdominal sections, over 100 hernia operations, 2 disarticulations at the hip, and 5 cases of trephining. Briefly, his method is as follows:—Chemically pure cocaine hydrochlorate is sterilised by exposure to a temperature of 300° F. for fifteen minutes, in tiny sterile glass tubes. The exact amount required for one operation is put into each bottle, generally .3, .4, or .5 of a grain, depending

on the age of the patient, and the extent of the anæsthesia required. When the patient is placed on the table, the lumbar region of the back is cleaned, and then the needle, made of steel wire tubing, number nineteen gauge, and three inches long, is thrust into the space between the third and fourth lumbar vertebræ, and pushed upward and forward, until it meets with diminished resistance, or until cerebro-spinal fluid passes. One of the little sealed bottles is opened, the contents emptied into a graduated glass hypodermic syringe, with glass plunger (Lure's syringe), and the syringe is fitted on to the end of the long needle, with the plunger nearly closed. Gradual withdrawal of the plunger, until the barrel is half filled with cerebro-spinal fluid, a moment's delay till the cocaine dissolves in the fluid, and gradual return of the fluid into the spinal canal, by pressing home the plunger, completes the administration of the anæsthetic. Should analgesia be desired in the upper extremities or head, introduce the needle in the third space, and use the same method, except that the dose should be $\cdot 4$ or $\cdot 5$ of a grain, and introduced as rapidly as the piston of the syringe can be pressed, then withdraw the needle, and seal with collodion. The analgesia is complete, for operations in the lower extremities, in from three to five minutes, and for operations in the upper part of the body, in from fifteen to twenty-five minutes, and last from one to three hours. The only ill effects, and they are very transient, seen after this method of spinal cocainisation, may be nausea or vomiting within the first fifteen minutes. Although the operation I saw was a trivial one, the patient made no complaint whatever of pain. Had I been able to wait two days longer in the city, which I could not, I should have seen abdominal hysterectomy under tropacocaine.

The spectator at an operation in an American hospital is struck by the attention to detail, or apparent attention, observed by the various actors in the drama, and by the general tendency towards an aseptic *régime*, which is the aim of most of the surgical institutions. Yet every now and again, one sees things which make him wonder whether after all they are not missing the greater in too careful attention to the lesser things which make towards idealism. Thus patients in the Johns Hopkins Hospital, undergoing operation for hernia and appendicitis, and not urgent cases, were placed on the table without any preparation of the patient's skin beforehand. The shaving and scrubbing up of the abdomen and genitalia were then carried out in a few minutes by the theatre porter, whose duties are to clean up the place and

make himself generally useful. In one big New York hospital, with a more than local reputation for being up-to-date, I watched a surgeon don sterilised gloves without having sterilised his hands, transfer his eyeglasses from his vest pocket to his nose, and proceed to open a cerebellar abscess through the mastoid process, in a patient whose head had not been shaved, and whose hair had not been clipped. Later on, I asked the house-surgeon if that was one of their best surgeons, and he assured me that he was—one of their finest. Frequently, after an abdominal section, the house-surgeon was left to close the abdomen and apply the dressing. Surely, if the operation were worth beginning, it were worth finishing by the surgeon.

In closing the operation wound, nearly every kind of suture material was used—catgut, chromic gut, iodised kangaroo tendon, horsehair, and silver wire. This last was used in the Johns Hopkins surgical service for a subcuticular suture after most operations, especially hernias. The use of silver leaf to cover in the wound was common, as was also the use of strips of adhesive plaster to retain dressings in place over an abdominal wound. In the Johns Hopkins, plaster of Paris bandages were used to exert pressure over the dressing in abdominal and hernia operations, and prevent yielding of stitches. After the operation, patients are sent to a special room, called the recovery-room, where they remain until they have recovered consciousness, and got over any after-sickness, before being sent back to the ward.

This short sketch is on the subject of American hospitals and their ways, and therefore I have said little about the individual men whom it was my privilege to meet; the more so because I have not asked their consent to paint their portraits with my pen, and because I met only very few of the really well-known men of the American medical profession. Those whom I did meet were nearly all surgeons. If you were to say to anyone in the old country, "I have been to Chicago," he would not ask, "Did you see the Rush Medical College, or the Wesley Hospital?" but almost certainly, "Did you see Murphy, or Senn, or Van Hook?" I am sure that the writings of these men will have for me now an added interest, a personal feeling, as if they were standing before me expounding with moving lips and hands the words that I am reading in their books. I met Murphy in his operating-room at eight o'clock one cold morning, all his six feet something of stature swathed in white, with only his nose and eyes visible. He was geniality itself to the medical men who had come to

see him operate, demonstrating everything to us. During the operations (there were four abdominal sections and a few other odd things) he kept up a running conversation about the case and about other cases, told stories about himself and against himself, which the cases brought to mind, and was not above cracking a joke with one of the graduates who had come back to refresh his knowledge. Senn, on the other hand, was of a different type. Not so tall, stouter, heavy in build and in features, he spoke slowly, and was more theatrical perhaps in style. Yet he demonstrated six cases, and operated on six other cases, in less than two hours. Before one operation was completed, the next case was wheeled in on another operating-table, anæsthetised, and ready. After seeing the house-surgeons, in the eastern cities, do abdominal sections, it was a surprise to see Senn tackle a simple circumcision, yet that was one of his operations that afternoon. Every step of his operation, every incision, every ligature was announced before it was made. An example of this attention to detail was the New York gynæcologist whom I saw spending fully twenty minutes in explaining and showing to his class how a piece of cotton-wool should be rolled on the end of an intrauterine applicator. Of Deaver in Philadelphia I saw little more than I did of Murphy, his eyes and his hands, for he operated without gloves. I was fortunate in seeing him do an appendicectomy. I have heard that his average is one a day. He did his work from beginning to end without saying almost a single word; and, having stitched the peritoneum, left his house-surgeon to finish the operation and the dressing, and rushed away to a private operation in some other part of the city. His manner of treating the stump of the appendix was by inversion into the cæcum, and suture of the peritoneum over it. In New York, where I saw a greater number of surgeons and more operative work than in the other cities I visited, the man who impressed me most, both by his personality and his work, was Lilienthal, of the Mount Sinai Hospital. Small, wiry, with bright restless eyes, he seemed to be possessed of superabundant energy; quick and neat in his operative technic, much addicted to the use of "damn" in its various forms, yet always saying it in a gentlemanly way, and with a great contempt for silver filigree, as he reiterated its uselessness more than once during his operations. When the patient on whom he was operating suddenly cleared his throat, Lilienthal jerked out, "What did he say, doctor; I'm sure he spoke;" and later, when nearly forgetting to remove a small piece of gauze from the interior of the stomach in the Finney

operation for benign constriction of the pylorus, it reminded him of the man who made the bass fiddle and left the glue-pot inside.

While going through the Pennsylvania Hospital, I inspected one department which I have never seen in any other hospital. This was a children's gymnasium attached to the orthopædic wards. In this long room, under the charge of a nurse who thoroughly understood and was in love with her work, were all manner of instruments and appliances for developing the muscles and strengthening the limbs and joints of children. Instruments for massaging the limbs, worked by an electro-motor, bicycles suspended off the floor for those with weak legs, Whiteley exercises, ladders for climbing, parallel bars, dumb bells, appliances slung from the roof for supporting paralysed children learning to walk—all these were there, and when the children came down daily for the exercises prescribed by Dr. De Forest Willard, it was all made like a new game to them by the nurses, so that the little ones grew happy and enthusiastic in their exercises. It was a department which ought to be in every large hospital, and which was here doing an immense amount of good. While on the subject of the Pennsylvania Hospital, I may say that it was a pleasure to find that a covered way, from the hospital to the nurses' home, had been directly copied from a similar, though larger one, in the Glasgow Royal Infirmary. Thus the influence of the "Royal" abroad was evident, even in architecture.

The American medicine man of to-day is a worthy descendant of all the great men of the past; young, and keeping young even when his years are many; restless, energetic, bold, he is ever striving towards an unseen ideal. He is, like the art he practises, in a transition stage, sifting the great mass of chaff for the few grains of wheat, and with a resolute determination to find them. He is jogging along in no rut, he is travelling over unbroken ground, with all the magnificent energy of his race. The future of our profession seems well assured in the hands of such a man, and the day may come, I think, when the younger members of our calling will go to extend their knowledge and finish their education, not in Berlin, or Paris, or Vienna, but in New York, and Baltimore, and Chicago.

For the scientific attainments of our American brethren I have great respect, and of their pleasant comradeship I have many happy memories. If any of their number should come within hailing distance of my wigwam, let him come in, and welcome.

CASE OF SUDDEN DEATH FROM EMBOLISM OF THE LEFT CARDIAC CORONARY ARTERY (DEATH OCCURRING WITHIN A MINUTE OF THE SEIZURE).¹

By JOHN LINDSAY STEVEN, M.D.

CASES of rapidly sudden death, whether taking place in the course of chronic disease or in the midst of *apparent* health, although common in occurrence, are so startling to medical men as well as to the public in general, that every well observed case deserves to be put on record, especially if, as in the present case, a *post-mortem* has been obtained. In such cases it will generally be found that some lesion has suddenly occurred, of such a kind as to produce the extremely rapid death. Cases in which the death occurs within a minute or two of the onset of the symptoms are not unlikely to be associated with such accidents as the rupture of an aneurysm within the pericardium, perforation of the wall of the heart itself, or, as in this case, embolism of the main trunk of one of the coronary arteries. It is not uncommon, also, for such patients to be the subjects of angina pectoris, and for death to occur during one of the seizures. In our case, however, there was no history of anything that could be interpreted as angina. His clinical history was that of a chronic myocardial lesion, with failing compensation, and all the indications were in favour of a chronic course, with possible improvement. The fact that he had passed a very good night is of interest from this aspect of the case. Another point of interest is that embolism of the main trunk of the left coronary artery caused death within a minute.

J. C., aged 57, quarryman, was admitted on 28th October, 1903, to Ward 7 of the Glasgow Royal Infirmary, suffering from breathlessness on exertion, and swelling of the feet, legs, and external genitals, of three months' duration.

The patient was a very stout, powerfully-built, tall man, with a very ruddy complexion, tending very distinctly to lividity on the cheeks and lips; there was much brawny œdema of the lower limbs and feet, but œdema had disappeared from the scrotum. He was able to lie down in bed, and, apart from the dyspnoea, which was very urgent on the

¹ Read at a meeting of the Glasgow Pathological and Clinical Society held on 14th December, 1903.

slightest movement—even turning in bed—he had no special complaint to make. The pulse was very irregular in force and rhythm, of low tension, and medium volume, numbering 84; the arterial wall was not degenerated. The apex beat was neither visible nor tangible; the cardiac area was enlarged towards the left. No murmurs could be made out, but the cardiac sounds were irregular in rhythm and in intensity, and it was thought that the second aortic was accentuated. Fine crackling râles were heard over both bases of the lungs posteriorly. The urine contained abundant albumen, and was loaded with pink urates.

2nd November, 1903.—After one of the best nights he had had since admission, he awoke this morning with a cry, clutched at a patient who was in a neighbouring bed, fell back in a slight convulsive seizure, and died within half a minute. The night nurse had barely time to reach the bedside before respiration ceased.

Post-mortem examination by Dr. Workman.—“A well-developed and well-nourished body, with extreme general anasarca. The pericardium contained about 8 oz. of clear serum. The heart was enormously enlarged from hypertrophy and dilatation of both ventricles, and weighed 24 oz. The valves presented healthy characters. The left auricle was considerably dilated, and in its auricular appendage there was a ragged adherent thrombus. The right auricle was also much dilated, and contained several adherent thrombi. The left coronary artery was very atheromatous, and plugged by an embolus riding on the fork of its first bifurcation. The muscular tissue of the heart wall was of good consistence and colour.

“Death had occurred with the heart in diastole, probably from failure of the blood supply to the myocardium.”

TUBERCULAR IRITIS.¹

By W. B. INGLIS POLLOCK, M.B., Ch.B.,
Clinical Assistant, Glasgow Eye Infirmary.

TUBERCULAR IRITIS is only given a small place in the current text-books of diseases of the eye. Many deny its existence,

¹ Read at a meeting of the Glasgow Pathological and Clinical Society held on 9th November, 1903.

except in a small percentage of cases. This is due to the lack of absolute proof in so many instances, as both clinically and pathologically the opportunity for microscopic or inoculation tests is rare, and the difficulty of a positive result is sometimes great. V. Michel¹ (1881) was the first to insist on the relative frequency, yet Axenfeld² (1901) and Ginsberg³ (1903), in his text-book of pathological anatomy of the eye, hold that many cases of iritis must not be attributed to tuberculosis without actual proof.

I am indebted to Professor Greef, director of the eye department in the Charité, Berlin, for the eyeball from the following case, and for permission to use it and the clinical notes of the case:—

Alice L., æt. 16, without any occupation, was admitted on 1st March, 1901, into the eye department of the Charité, Berlin.

She was the illegitimate child of a ballet-girl who had died ten years previously of consumption. She herself, apart from repeated colds, had not suffered from any severe illness. Since childhood her sight and hearing had been bad. Two years previously she had been in the Charité for a short time on account of severe interstitial keratitis in the right eye, followed by a milder attack in the left. A course of mercurial inunction, iodides, and baths had failed to produce any improvement. Twice later this treatment was repeated, with the same result. This time she was admitted on account of great diminution in the vision of the left eye.

Condition on admission.—Patient is a weakly girl, of pale colour, and badly nourished. Deafness, due to labyrinthine disease, requires words to be spoken directly into the ears. The teeth are of a dirty colour, but show no notching or stunting in the incisors. The chest is flat and depressed in the infra-clavicular region. Over the right apex is diminished movement, altered percussion note, bronchial breathing, but no râles; otherwise healthy.

In left eye there is severe pericorneal injection, ciliary tenderness on pressure, and the cornea is obscured by a slight breath-like opacity, into which blood-vessels run. The surface is flat. The iris and pupil are fairly easily seen. The latter

¹ V. Michel, v. Graefe's *Arch. f. Ophth.*, 1881, Bd. xxvii.

² Axenfeld, *Allgemeine Pathologie und pathologische Anatomie des Auges*, from Lubarsch-Ostertag's *Ergebnisse der allgemeinen Pathologie*, VI Jahrgang.

³ Ginsberg, *Grundriss der pathologischen Histologie des Auges*, 1903.

is small and irregular, with posterior synechiæ, and does not respond to light. The iris is discoloured and its surface markings are almost entirely effaced. Near the pupillary margin, along the smaller arterial circle of the iris, are seven or eight small millet seed-like nodes, of a grey colour, projecting above the surface. No vessels enter them. They are all below the level of the upper edge of the pupil. The fundus cannot be detected in detail. Tension is slightly minus; V.A. = $\frac{1}{15}$.

In right eye there is also considerable pericorneal injection, but cornea is more opaque than the left, and development of vessels greater. Four or five nodes are seen in about the same situation of the iris as in the left eye, but no further details are visible on account of the opacity. Tension normal; V.A. = $\frac{1}{20}$.

Course of the disease.—Treatment: rest, atropin, and warm fomentations to allay the irritation. As the pupils remained fixed, and the tension rose in both eyes, a superior iridectomy was performed in right on 11th and in left on 19th March. Wounds healed regularly, and only in left appeared slight signs of reaction. By 1st April the condition was unchanged—right had V.A. = $\frac{1}{20}$. Left, still great injection. The surface markings of the iris were obliterated. Nodes not so distinct. Tension minus. V.A., left = movements of hand at 2 feet. On 20th April a course of mercury and iodides was commenced, but given up on 20th May, as no improvement had occurred. V.A., right = $\frac{1}{10}$; V.A., left = fingers at 2 feet. By 1st July a greyish-white node formed in the upper margin of the right cornea. The nodes on the iris had become less distinct. Tension was decreased, and slightest pressure on the globes caused pain. The right remained unchanged, but left became softer and more painful and inflamed, so on 27th July the left eye was enucleated.

She was dismissed on 11th September with V.A., right = fingers at $3\frac{1}{2}$ feet, and tension minus also.

The left eyeball was placed in Müller's fluid and preserved in 70 per cent alcohol, then embedded in celloidin for cutting into sections.

Naked-eye examination.—The anterior chamber is shallow; the vitreous shrunken to two-thirds; the retina in position; and a number of tubercles the size of pinheads visible in the choroid. A slightly larger one, lying at the inferior part, I returned to Professor Greef for the museum.

Microscopic examination.—There are numerous broad peripheral adhesions of the iris to the cornea, but internally

and superiorly the angle of the anterior chamber is free. At almost all parts the iris is attached to the anterior surface of the lens at the pupillary margin (posterior synechiæ). A fine connective tissue membrane lies across the pupil, representing an exudation of some considerable age, which has been replaced by fibrous tissue. That its origin is not very old is shown by the presence of oval cells which are passing into spindle cells, and by the absence of shrinking. At the centre of the lens it is thicker, but for the most part it is little more than a single layer of cells. There is considerable bulging of the iris forwards near its peripheral attachment, a condition termed clinically "iris bombé." All these show that increased tension has caused the destruction of the eyeball, and led to the atrophy of the ciliary body to be described.

The nodules projecting on the surface of the iris are composed of epithelioid and round cells, the latter in predominance. They have no capsule nor vessels in the interior. Giant cells and tubercle bacilli were not found. Other nodes lie deep in the stroma of the iris, and a number are present near the periphery of the anterior chamber in the ligamentum pectinatum or the iris. Most of them lie about one to two millimetres from the pupillary margin. No caseation was noted. The remaining changes in the iris are mainly those of atrophy. The delicate reticulated stroma of branching cells has been almost entirely lost, especially in the ciliary zone, and is replaced by a tissue rich in round- and spindle-shaped elements. The posterior pigment layer is in position. Small hæmorrhages are seen at one or two places (Fig. 1, p. 112).

In the ciliary body are also seen the same circumscribed aggregations of cells, some even in ciliary processes, but the most marked change is the atrophy of the various structures, the ciliary muscle and the ciliary processes, accompanied by a connective tissue increase.

The cornea is the seat of an infiltration of round cells lying between the lamellæ, with the presence of numerous blood-vessels. The lamellæ look as if replaced by connective tissue at many spots. These changes are most marked in the posterior layers. Bowman's membrane is interrupted at many places with some irregularity of the epithelium and of the subjacent corneal lamellæ. Descemet's membrane is normal, only showing an artificial fold near the centre. The epithelium lining it is in position, and here and there a few cells are seen adhering to its posterior surface. No tubercles or giant cells were found, although several of the former are seen in the spaces of Fontana, as already mentioned. The lens

shows several artificial breaks, but is otherwise normal. An albuminous exudation fills the anterior chamber, and a layer of fibrin and cells entangled in it is lying in front of the pupillary membrane. There is also a great increase of

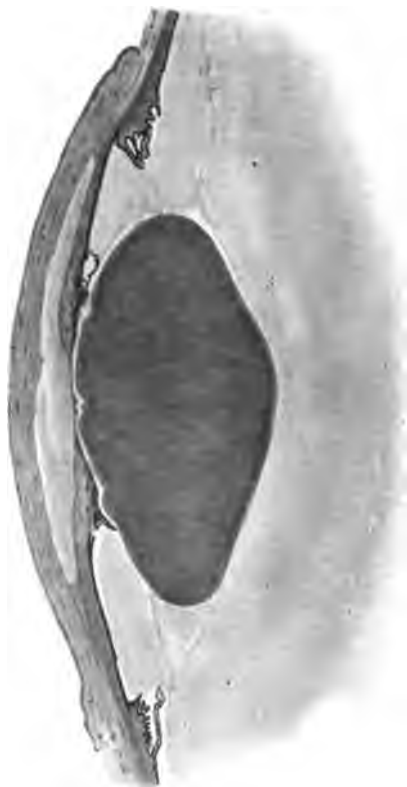


FIG. 1.

Anterior segment of eyeball through the pupil, showing at the lower angle the peripheral adhesion of iris to cornea, the pupillary membrane, the posterior synechia, and atrophy of the ciliary body. The lens has been dislocated backwards artificially, and this brings out well the pupillary membrane. No nodes. ($\times 12$ diam.)

albumen in the vitreous, with a few round cells between the ciliary processes (Fig. 2, p. 113). The choroid shows numerous tubercles, with centrally-placed giant cells surrounded by epithelioid and, in the periphery, round cells. They project towards the retina, bulging it inwards. The pigment layer is

broken up and increased or absorbed. The retina over the tubercles is attached, and its external layers degenerated. At other places in the choroid there are intense collections of small round lymphocytes. At the posterior pole the vessels are greatly dilated, and near the optic nerve entrance



FIG. 2.

A tubercle in the choroid with several giant cells. ($\times 80$ diam.)

is another tubercle. No caseation nor tubercle bacilli were found. The retina, apart from changes noted, is normal. There is slight œdema of the disc, but the optic nerve is normal. Around the vessels penetrating the sclerotic are numerous lymphocytes.

Iritis, accompanied by nodules, may be syphilitic, tubercular, sympathetic, leukæmic, or due to presence of caterpillar hairs, or finally result from some possible general inflammatory action, the nature of which we do not know. In the present case sympathetic disease can be neglected, nor does this case give any support to the recent hypothesis of Peters¹ that many cases of sympathetic disease are tubercular. The other etiological factors, except syphilis and tuberculosis, may also be set aside.

In favour of a diagnosis of congenital syphilis are the following:—She was the illegitimate child of a ballet-girl; the opportunity for infection therefore cannot be denied. She had great deafness, and during the last two years suffered from interstitial keratitis, but the teeth showed none of the characteristics described by Hutchinson.² The deafness was due to labyrinthine disease, and most probably, but not demonstrably, syphilitic. Keratitis interstitialis may result from other causes than syphilis, notably tuberculosis, as in a case of v. Hippel's,³ which had been diagnosed clinically as specific, but pathologically showed numerous typical tubercles in the iris and other parts, but no bacilli. The cases of Schultze⁴ and Zimmermann⁵ also dispose of Hutchinson's⁶ statement that interstitial keratitis, in its typical form, is always a consequence of syphilis, and sufficient for a diagnosis.

The reasons for the diagnosis of tuberculosis were the following:—In the present case, continued treatment by mercury and iodides failed to give any improvement in either corneal or iritic condition.

Syphilitic nodules are usually found at the pupillary margin, and very rarely in the body of the iris; they are often reddish in colour, and limited to one or two in number. The tubercles in the present instance were greyish, numerous, and situated along the line of the lesser arterial circle. Histologically they are composed of the same elements as may occur in syphilis or tuberculosis. Those found in the deeper parts of the eye showed the structure of tubercles in every respect. They have the characteristic giant cells with marginal nuclei, the branching processes, the epithelioid cells,

¹ Peters, *Zeitschrift f. Augenheilk.*, 1901.

² Hutchinson, *Syphilis*, 1887.

³ V. Hippel, v. Graefe's *Arch. f. Ophth.*, 1893, Bd. 39.

⁴ Schultze, *Arch. f. Augenheilk.*, 1896, Bd. 33.

⁵ Zimmermann, v. Graefe's *Arch. f. Ophth.*, 1895, Bd. 41.

⁶ Hutchinson, *loc. cit.*

and the marginal accumulation of small round cells. Can syphilis produce such a picture as seen in Fig. 2 (p. 113)? A few pathologists think so. None of the reported cases of syphilis in the eye show any lesion like it, except a case of Peppmüller's,¹ which he believed to be syphilitic, and his argument rests on rapid healing after potassium iodide, although tubercle bacilli were found and the inoculation test was successful.

The absence of caseation is unimportant—either this case may have been passing into a fibroid condition, or simple disappearance of tubercles was occurring. Regarding the failure to find tubercle bacilli, it need hardly be mentioned how difficult it is to discover them in certain admittedly tubercular lesions, and this is true even where one has injected the bacilli; but where tissue has lain, as this eye did, in Müller's fluid for a lengthened period, it is almost impossible. I stained twenty-five sections without finding them, and then the attendant did another six also unsuccessfully. Hill Griffith,² after a review of thirty-two cases of tubercular iritis, says that "the value of this test is only great where the results are positive, as failure is so very common even in the hands of competent men." Professor Dresfeld examined for them in his case without success. Leber³ has also shown how cases, even in spite of the absence of giant cells, of the discovery of bacilli, and the failure of the inoculation test, may yet be tubercular. The tissue of the present case had lain too long in alcohol to be available for inoculation.

Looking at the nodes in the iris, in the ciliary body, pectinate ligament, and in the choroid, in fact the whole uveal tract, one is forced to the diagnosis of the same process in each constituent, since each is so liable to be involved in any inflammation in another; they have the same blood and nerve supply. The nodes in the anterior segment are less developed, or they have passed beyond the typical stage. As regards the tubercles in the choroid, almost all pathologists will acknowledge they are tubercular. We have then a tubercular invasion of the whole uveal tract; and, in view of the clinical history, I am inclined to think that the choroidal affection is possibly later. It was five months after the admission of the patient before the enucleation was performed, and in that time the nodules in the iris had slowly subsided

¹ Peppmüller, v. Graefe's *Arch. f. Ophth.*, 1899, Bd. 49, part 2; reference, Axenfeld, *Ergebnisse*.

² Hill Griffith, *Trans. Ophth. Soc. United Kingdom*, 1890.

³ Leber, *Bericht der Ophth. Gesellschaft. zu Heidelberg*, 1891.

and lost their distinct prominence. Those in the choroid were not advanced enough for caseation.

In support of this diagnosis there are a few additional points. The cornea at numerous places indicates shallow losses of substance which have healed, and that several years ago, as the surface was quite flat. They must have been ulcers, and were in all probability phlyctenular. This accounts for the dimness of sight since childhood, and would be consistent with a strumous diathesis. The patient was 16, and Hutchinson¹ describes cases of iritis in congenital syphilis as occurring in infancy, and being very susceptible to treatment. The patient's chest had the tubercular appearance, if one may say so, and the right apex was affected. Her mother had died ten years previously of consumption.

Greef² differentiates three forms of tuberculosis of the iris; the two first are due to Haab,³ and the third to v. Michel⁴:—

1. Miliary tuberculosis, in which tubercles are observed on the surface of the iris. Leber⁵ called it "attenuated tuberculosis," on account of the recovery, which often occurs by the process subsiding spontaneously, and the absence of any tendency to form large nodes. It has nothing to do with attenuation of the bacilli, as Samelsohn⁶ showed by experiments and clinical cases. The disease may lead to destruction of the eye, either by the shrinking of a plastic irido-cyclitis or occasionally from a glaucomatous condition. Here rise of tension occurred early in the disease, but after an iridectomy, which healed normally, there set in a progressive painful softening, associated with the atrophy of the ciliary body, which led to the enucleation.

2. The solitary or conglomerate tubercle, which slowly increases in size, and ultimately almost invariably leads to destruction of the eye, either by shrinking or more commonly by perforation. Enucleation requires to be performed in every case.

3. Simple tubercular iritis. Clinically it shows no distinctions from syphilitic iritis, but microscopically typical

¹ Hutchinson, *loc. cit.*

² Greef, "Die pathologische Anatomie des Auges," Orth's *Lehrbuch der spec. path. Anat.*, 1902.

³ Haab, v. Graefe's *Arch. f. Ophth.*, 1880, Bd. 25.

⁴ Michel, *loc. cit.*

⁵ Leber, *loc. cit.*

⁶ Samelsohn, *Bericht der Ophth. Gesellschaft. zu Heidelberg*, 1893.

tubercles are found lying in the stroma of the iris. Axenfeld¹ declines to accept this one, except in so far as it is a stage of the first, but v. Michel and his pupils claim that there are such cases, and that they run a course the same as the ordinary iritis without nodules, and the diagnosis rests mainly on the general condition. It is over this form that there is so much contention, and it is not yet settled.

The different forms may pass into one another, and sometimes are not to be sharply separated. Two of Samelsohn's² cases, which were dismissed healed from miliary tuberculosis, returned later with a graver form, and died by meningitis shortly afterwards.

Most now agree that tubercular iritis is secondary, in so far that the virus, apart from trauma, must come through the body. Still, the source of infection may have quietened down, and only the eye remain active. Bacilli are swept through the filtration angle, where tubercles so often occur, into the circulation. Tuberculosis of the eye, however, frequently remains local, as in bone or joint disease. The older view of enucleation in every case, undoubtedly, saved lives, but it is being given up. In the miliary form conservative treatment has taken its place—atropin, fomentations, and sedatives if necessary. Tuberculin has been tried by some with varying results, but is viewed sceptically by most surgeons. Iridectomy has also been done in Griffith's series³ eight times, but in each case the eyeball had subsequently to be enucleated. If one remembers the tubercles in the stroma, and hidden at the angle of the anterior chamber, no astonishment need be expressed over this result. Enucleation is to be reserved, then, for cases in which other treatment has failed and the eye is useless for vision, where there is danger of sympathetic disease, or where the tubercular lesion is an advancing destructive one. These indications I owe to Hill Griffith.³

To enable us to come to a surer diagnosis, and lead to further accuracy, there should be more routine examination of the excised portion of iris in all old-standing cases of iritis. This position is held by most continental workers, and although difficult, yet it is sure to widen knowledge if followed with care.

Postscript.—Since writing the above, I have read a very

¹ Axenfeld, *loc. cit.*

² Samelsohn, *loc. cit.*

³ Hill Griffith, *loc. cit.*

suggestive paper by Darier,¹ of Paris, communicated to the Ophthalmological Section of the British Medical Association, 1903, on the treatment of interstitial keratitis by tuberculin T.R. He mentions a number of remedies, and some of these might be tried in tubercular iritis.

CORRESPONDENCE.

RIB FRACTURED BY COUGHING.

To the Editors of the "Glasgow Medical Journal."

SIRS,—Some weeks ago, I was asked to see Mrs. F., an old lady of 62 years, who was suffering from a severe pain in her left side, which had come on during a paroxysm of coughing some hours previous to my visit. Her statement was to the effect that for several weeks she had suffered from a bad cough, which she had reason to think might be whooping-cough, because of the character of the cough, because she never had the disease in early life, and because a visitor to her house was suffering from it at the time. Some hours before my visit, she had a severe attack of coughing. During the paroxysm, she felt a snap in her side and experienced a severe pain which drew her up at the moment and persisted, so that she could not breathe or cough without great pain.

On making an examination, I had not the slightest difficulty in discovering that she was suffering from a fractured rib. There was no pleurisy, and there was no emphysema, but there was pain and tenderness at a certain spot on one of the floating ribs. Crepitation was distinctly and easily made out.—I am, &c.,

H. E. JONES.

IBROX, 12th January, 1904.

¹ Darier, *Ophth. Review*, December, 1903.

NEW PREPARATIONS, &c.

THE "PHARMA" MILK FOOD FOR INFANTS AND INVALIDS (Glasgow: James Taylor).—This new food is manufactured by the "Pharma" Food Co., in Wilts, and is supplied in the form of fine flakes or coarse granules, which are prepared for use by the addition of half a teacupful of hot water to one or more teaspoonfuls of the food, the strength of the mixture being adapted to the age of the child. Analysis shows that the food contains approximately 21 per cent of fat, 45 per cent of sugar, 21 per cent of albuminoids, and 6 per cent of mineral matter, together with some moisture.

"ARABELLA" NATURAL MINERAL WATER (London: Arabella, Limited).—We have received a sample of this bitter saline aperient water, which is bottled at the springs in Hungary. Its composition suggests that it would act on the digestive tract like several of the other well known and much used mineral waters, and we find on trial that such is the case. The principal mineral constituent is magnesium sulphate, of which some 22 grammes are contained in a litre. Sodium sulphate is present to the extent of 15 grammes per litre. The solids altogether amount to about 41 grammes per litre. We can therefore recommend "Arabella" as a good bitter aperient water.

FUSSELL'S PURE RICH CREAM (London: Fussell & Co.).—This cream is sterilised in vacuo by a patent process whereby its flavour is not impaired, and without the addition of any chemicals. It is prepared in Norway, and can be kept for a long time in the hermetically sealed tins in which it is supplied. It can be whipped, or put to any other purpose for which fresh cream is employed. It is thick and rich, and should prove a valuable article of diet. We can strongly recommend it.

MEETINGS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1903-1904.

MEETING II.—9TH NOVEMBER, 1903.

*The President, MR. A. E. MAYLARD, in the Chair.*1.—NOTES OF A CASE OF DOUBLE CONGENITAL HYDRONEPHROSIS
IN A YOUNG MAN.

BY DR. JAMES HAMILTON.

The subject of this case was a young unmarried man of 22 years, a tailor to trade, a teetotaler, and a temperate smoker.

He was admitted as an urgent case into the Victoria Infirmary on 15th September last, and was under my care, in the absence of Dr. Duncan on holiday, during the first two weeks of his residence there. He complained of gastric pain, polyuria, and partial blindness. His illness had begun three weeks before with pain over the stomach and occasional vomiting after meals; but not enough to prevent him getting about until two days before admission, when he was, in addition to his other troubles, suddenly seized with a severe pain across the forehead, culminating in blindness, which, however, in the words of Dr. Wilson, the resident assistant (who had the opportunity of seeing this symptom), "was not absolute, as he was able to distinguish the shadows of objects placed between him and a strong light." This attack of blindness gradually passed off, and was quite gone the day after admission. Ophthalmoscopic examination revealed nothing as to its cause.

His previous history showed that, with the exception of an operation for hernia at the age of 4 years, he had enjoyed good health until three years ago, when, after an attack of scarlet fever, he began to be troubled with constipation. This constipation became very chronic (the bowels moving, as a rule, only twice weekly), and was frequently accompanied by severe colicky pains over the left hypochondrium, relieved only by

vomiting. These attacks of pain recurred on an average once a month, but rarely were so severe as to require medical aid, although he usually had recourse to some purgative at these times. Only on one occasion (a fortnight prior to admission) had he an attack of diarrhoea.

His development was normal, although he did not look over-robust. He had a pale complexion, dilated pupils, and coated tongue. Examination over heart and lungs detected nothing worthy of mention. Liver dulness was normal. The abdomen presented a distinct bulging below the lower costal margin on the left side, which was readily felt to be a tumour, about the size of a six months' foetal head, when the hand was placed over it. This mass was somewhat tender to pressure, and the percussion note over it was dull-tympanitic. The fingers could get underneath its lower rounded margin, which could be felt to be smooth—presenting no irregularities or notch. By placing one hand over the tumour in front, and the other in the loin immediately behind, "ballottement" was easily obtained. Bulging to a slight degree was also present in the loin, and the note in this region was absolutely dull compared with the perfectly resonant note over the same situation on the right side. The tumour did not descend with ordinary inspiration, and no fluctuation could at this time be elicited.

His temperature was normal. His urine was pale, with a specific gravity of 1008, acid; no deposit, and absence of albumen or sugar. Blood had never at any time been seen in the urine.

The differential diagnosis was carefully gone into at this stage, and the conclusion arrived at was that the tumour was renal; but whether solid or cystic, subsequent history and observation would be necessary to elucidate.

The patient was therefore placed on light diet, and no medicinal treatment suggested, with the exception of an occasional dose of mag. sulph. He was kept strictly in bed, and minute instructions were given to measure and test the urine daily. For the first three days after admission the urine measured 60 to 80 oz. in the twenty-four hours, but on the fourth day a gradual rise in quantity was noted, until by the tenth day it had reached 140 oz. It was still very pale, of low specific gravity (1008), and a slight trace of albumen was now present. Coincident with this rise in the urine, the tumour was seen to become gradually less prominent and smaller in size, until almost every trace of it disappeared. The dull area in front now gave a clear tympanitic note,

and pressure from before backwards failed to detect the presence of the former tumour. The patient expressed himself as feeling perfectly well, having no pain or discomfort, and was up and getting about the wards. This feeling of well-being continued throughout the next week, but the quantity of urine again getting less, the uncomfortable feeling over the left side returned, and the tumour again made its appearance in the same situation as before.

The diagnosis seemed now tolerably clear, viz., that we had to deal with a left hydronephrotic kidney—the symptoms, physical signs, and behaviour of the tumour could point to nothing else, but the cause of it was more difficult to decide. I ventured the opinion that it might be due to some inflammatory adhesions, with neighbouring structures dragging and kinking the ureter under certain bowel conditions, which operative procedure might be able to release. The patient expressed himself as perfectly willing to have anything done in the way of operation that was considered necessary; and, after Mr. Maylard had seen him, he was transferred to his ward. Mr. Maylard kept him under observation for another week, during which time the symptoms and signs already noted became more pronounced. Distinct fluctuation and anterior bulging were now notably present; and, as the distress of the patient was very apparent, operation was decided on.

Mr. Maylard operated on the thirty-sixth day after admission, and removed a large hydronephrotic kidney. The patient did very well for the first two days after the operation, excreting 40 and 31 oz. on each of the two days respectively; but anuria set in on the third day, and death took place the day following.

The chart shown indicates the temperatures and quantities of the urine throughout the time he was in hospital.

I am indebted to Dr. Anderson, our pathologist, for the following notes of the condition of the kidney removed by operation, and the *post-mortem* report:—

“Description of left kidney removed by Mr. Maylard on 20th October.—A well-marked example of hydronephrosis. Weight of organ, 8 oz.; size, 5½ inches by 2½ inches by 2¼ inches. The pelvis is dilated to form a globular swelling nearly 2½ inches in diameter. The calyces are moderately dilated. On cut section, cortex and medulla present an abnormally firm consistence, pale and glancing in appearance. The cortex is slightly increased, but the medullary portion shows atrophy, and is badly differentiated from the former. The papillæ are

flattened. The capsule is thickened posteriorly where adherent to underlying structures, but at other parts is of normal thickness and not abnormally adherent. The ureter shows constriction at the point of origin from the pelvis.

"Microscopic examination of the kidney shows an atrophy of the secreting structure. The glomeruli are small in size, with dilatation of the space between the tuft and Bowman's membrane, cystic dilatation of the uriniferous tubules, and a chronic fibrosis of the organ.

"*Summary of the post-mortem report.*—The body is well developed and well nourished. There is an abdominal wound in the left linea semilunaris, 7 inches in length; from the middle of the incision a wound extends to the left for a distance of 4 inches. The heart (weight, 11 oz.) shows slight hypertrophy of the left ventricle. The other chambers are normal in appearance. All the valves are healthy. The lungs present no special features.

"*Abdomen.*—A general peritonitis is present. The stomach and intestines show tympanitic distension. Liver, pancreas, and spleen present healthy appearances. The seat of the removed kidney is congested, and shows slight tissue necrosis. The ureter is slightly dilated in its entire length. The opening into the bladder is in no way stenosed. The right kidney is found in a condition of hydronephrosis similar to the left kidney, but with less distension of the pelvis and calyces. The ureter, at its junction with the pelvis of the kidney, is crossed in front by a small abnormal renal artery, which passes to the inferior pole of the kidney. The artery is accompanied by a similar small abnormally situated vein. Examination of the vessels going to the left kidney show presence of similar vessels, and in the kidney itself the cut vessels and their position can be recognised. The ureteral opening into the bladder on the right side is normal in character. The bladder presented healthy appearances, and contained about 6 oz. of slightly turbid urine. The urine showed presence of triple phosphates, distinct albumen, epithelium of pelvis and ureter in considerable amount. Urea, 1·9 per cent."

I have brought the case before the Society, not only on account of the comparative rarity of the disease, but also because of several interesting features it presents. There was, for instance, the striking fact that with such a marked congenital condition of both sides, giving rise to so much actual destruction of kidney tissue, a young man should not only live

to the age of 22 years, but enjoy considerable health and comfort, manifesting only trifling evidence of disease up to within a few weeks of his death. There were no ordinary kidney symptoms, such as the presence of albumen, or evidences of defective elimination of urea, unless the sharp and exceedingly transitory attack of amaurosis might in this way be accounted for.

Further, there was the unusually clear clinical picture presented after a fortnight's observation in the hospital, which gave rise to no doubt as to the diagnosis, although it required in this case the assistance of the pathologist to demonstrate the similar, though much less pronounced, condition in the other kidney. We see now that we assumed too readily that the cause was probably local and removable, whereas had we on the medical side of the hospital taken the precaution to examine the patient under chloroform, when all resistance of the abdominal muscles would have been subdued, probably the enlarged right kidney would have been discovered. This leads up to the last and only other point in the case I would mention, namely, the question of advising operation in those cases.

The only case which bears some resemblance to this one, that in the short time at my disposal I have been able to discover, is one reported by Roberts in his work on *Urinary Disease* (p. 491), where a young man lived under nearly similar conditions up to the age of 20 years, dying of uræmic convulsions.

I have to acknowledge my indebtedness to Mr. Maylard and Dr. Duncan for permission to bring the case before you.

Mr. Maylard said that as the case had come under his care and operative treatment, he ought perhaps to say a few words about it. An attempt was made by the first incision to expose the tumour, but the mesocolon was so stretched over and intimately attached to it that no removal from the front was possible. For that reason a lateral incision was carried outwards and backwards, and enucleation attempted from behind the descending colon. In detaching the connections of the kidney above and behind, a gush of fluid suddenly took place, which considerably lessened the anterior projection of the mass. But, notwithstanding this, great difficulty was experienced in separating the kidney and distended pelvis from the parts around. The ureter was ligated at the lower part, and the renal vessels some 2 inches or more higher up, so that these latter appeared in no relation with the ureter. The

wound was drained by a large tube from behind. The man seemed to do well for the first twenty-four hours, and passed 40 oz. of urine. Although suffering considerable pain, no morphia was administered until it was seen that his kidney was secreting freely, after which he had $\frac{1}{8}$ gr. His temperature did not rise much above 100° until the last day, when it shot to 102° . His pulse was rapid from beginning to end, frequently being between 130 and 140. Wound drained well, and there were no abdominal symptoms. On the fourth day after his operation there was sudden cessation of urine, accompanied with drowsiness. Mr. Maylard said that during the four days he lived there were no symptoms, excepting his pulse, to indicate peritonitis. He felt it difficult to explain why there should have been this condition, except that in a case where the remaining kidney was also defective there was also a greater likelihood of an inflammatory condition arising from the slightest source of infection. Notwithstanding that every precaution was taken against infection, he felt that it must be accounted for by the unexpected gush of fluid which occurred at the operation, and which the pathologist subsequently showed to contain some pus cells.

II.—TUBERCULAR IRITIS.

By DR. W. B. INGLIS POLLOCK.

Dr. Pollock's paper appears as an original article at p. 108.

III.—RETRO-PERITONEAL TUMOUR (DERMOID) REMOVED BY VAGINAL CÆLIOTOMY.

By DR. J. M. MUNRO KERR.

The specimen which I show was removed from a patient on 28th July. She was sent to see me by Dr. Laird, of Milngavie. Some two years before I had seen her on account of pelvic pains, but I could then detect nothing abnormal. The pain, however, continued. Four months before coming to me for the second time she was delivered of a full-time healthy child (her first had been stillborn) without difficulty. The puerperium was normal. She came to me on account of the abdominal pain, and to see if I could disabuse her of the idea that she was again pregnant, a condition that she dreaded greatly. I made a bimanual examination, and was surprised to find that behind the uterus, apparently in Douglas' pouch,

there was an elastic swelling, about the size of a turkey's egg. The uterus did not appear to be enlarged, and was in normal position. I excluded at once the possibility of intra-uterine pregnancy. I was, however, rather suspicious at first, I must admit, that the condition was one of extra-uterine pregnancy, for the patient was afraid she was pregnant, had, although nursing and healthy, ceased to have any milk, and had had six weeks before seeing me a discharge of blood, which might have been a period. I took her into a nursing home for observation, and examined her under chloroform with Dr. Laird. After the examination, and after talking over the case, the idea of extra-uterine pregnancy became less tenable, for the uterus was not enlarged, and there was no feeling of pulsation in the vault of the vagina. I therefore leaned to the idea that the swelling must either be a cystic ovary or tube.

As the patient was in the nursing home, it was thought advisable to operate, and I opened the abdomen a few days after the chloroform examination. Having got my finger into the abdomen, I was greatly surprised when I found that the swelling I had felt was not inside the peritoneal cavity, but behind the peritoneum, in the cellular tissue in front of the rectum. The right ovary was cystic and was removed, the other was healthy and was left. The question of dealing with the cystic swelling, which I suspected must be a dermoid, had now to be considered. It seemed that the most sensible proceeding would be to enucleate it from the vagina, and this was easily carried out. A transverse incision was made in the vaginal vault behind the cervix over the tumour, which was pushed down from the abdominal cavity by my friend, Dr. M'Lellan, who was kindly assisting me. The cavity was then packed from the vagina. The abdomen was then closed, and the uterus tacked to the lower part of the abdominal wound. The recovery was uninterrupted. The tumour, when opened, was found to contain sebaceous matter and hair. The wall of the cyst was extremely thin.

IV.—PYÆMIA FOLLOWING AN ATTACK OF APPENDICITIS.

BY DR. DONALD FRASER.

Dr. Fraser, Paisley, discussed the case of a man who had died in Riccarton Asylum from pyæmia following an attack of appendicitis, for which he was operated on four weeks before death, and where, in addition to numerous pyæmic abscesses in the liver, there was a large hæmorrhage in the

right frontal lobe of the brain. The right parietal and frontal lobes of the brain showing this hæmorrhage were shown to the Society.

At the *post-mortem* examination, the dura mater was found non-adherent, but deeply injected in the frontal region. There was little subarachnoid fluid, but the soft membranes over the frontal lobes were deeply engorged. The right ventricle contained blood, the left blood-stained serum. The hæmorrhage in the right frontal lobe had torn up the brain tissue from the anterior surface to the anterior cornua of the right lateral ventricle, the clot being continuous with the blood in that ventricle.

The operation wound in right abdominal wall was well cicatrised, except at lower extremity, where there was about half a drachm of thick yellow pus. There was about a drachm of pus on inner surface of wound at this point, and about two or three drachms at the upper end, where there was matting of bowel and omentum. The cæcum was firmly adherent to parts around, and the suppurating stump of appendix was at the lower part of cæcum behind. There were firm adhesions between visceral and parietal peritoneum at site of operation wound.

The occurrence of pyæmic abscesses in the liver in a case of this kind is not uncommon. The interest here is in the occurrence of a cerebral hæmorrhage, the result, I believe, of septic thrombosis. The clinical history of the case presents some points of considerable interest, though only the terminal stages of it came under my observation; but, fortunately, while in the Victoria Infirmary, before admission to the asylum, he was under the care of our president, who will be able to supplement, as far as necessary, the brief account of the case I have to give.

He was a man of about 32 years of age, and was admitted to Riccarton Asylum on 19th October from the Victoria Infirmary, Glasgow, where he had been operated on for appendicitis about three weeks before. He was admitted in a very weak state, moaning loudly, very restless, and apparently unconscious. He was well formed and well nourished, without hair on face or pubes, and with infantile genitals.

For the first few days after admission he suffered from diarrhœa, with dark offensive stools. His pulse was 140, regular, but very weak; his temperature averaged 99.2°, occasionally rising to 100.2°. His pupils were moderately dilated, and reacted feebly to light. His eyes were turned to the right and downwards. The superficial and deep reflexes

were exaggerated at first, towards the end absent. There were never any indications of paralysis of limbs.

His restlessness and loud moaning or crying continued till within a day or two of his death, the tendency in his incessant restless movements being to turn to the right side. His head was retracted, and so constantly in movement that the hair on back of head was rubbed off. He never showed the slightest sign of intelligence, nor did he seem capable of articulate speech from the day of admission. The clinical picture was that of a case of cerebral meningitis. It was evident from the time of admission that the patient was hopelessly ill, that his illness was pyæmic, and probably a sequence of his appendicitis, and that his mental condition was the result of some gross cerebral lesion which, while under our observation, had nothing in common with ordinary insanity, though, from the history of the case while in the Victoria Infirmary, he appeared to have suffered from delirious mania while there. A feature of the case throughout was the presence of cutaneous hyperæsthesia; wherever touched, he cried out as though acutely pained.

His weakness steadily increased till 28th October, when he died, nine days after admission. A few days before death, the right leg became swollen and œdematous. It was also noted that small boils, which suppurated rapidly, began to appear before death.

Though I understand from Dr. Alexander Ferguson, who has examined the specimen pathologically, that he has not found such pyogenic organisms as might be expected in a case of septic thrombosis, yet I have no doubt, from the history, the absence of disease in the circulating system, as well as the local conditions, to which Dr. Ferguson will no doubt speak, that the hæmorrhage was due to a septic thrombosis.

It may also be of some interest to note that the only observed sensory or motor symptom observed, as due to this extensive lesion of the right frontal lobe, was the conjugate deviation of the eyes to the side of the lesion, a symptom, according to Ferrier's observations, which, when the result of a post-frontal lesion, experimentally produced in monkeys, is only of temporary duration, compensation being comparatively rapidly effected. Here, however, the destructive lesion could not very well be compensated from the effects of the general condition. Probably the tendency to turn towards the right side in his bodily movements was also due to this frontal lesion.

As to the hyperæsthesia, if it were not hyperalgesia, I am

inclined to think it was as a symptom, not so much due to a focal central lesion, as to a general perversion of sensibility, and such as is sometimes seen in cases of alcoholism and of acute mania.

Mr. Maylard gave the following clinical facts in connection with the case:—

The patient was admitted into the Victoria Infirmary on the third day of his attack of appendicitis. His first attack was about the end of February of this year, and only confined him to bed for five days. His second attack was five months later, in June. This was much more severe, accompanied with fever, and confined him to bed for a fortnight. For the last four months since that attack he has had intermittent seizures of pain in the region of the appendix. The following day of his admission there was a slight fall in the temperature, and the pulse was practically normal—76. It was therefore decided to wait, with the hope that the third attack was going to pass away, and then to operate. Pain and tenderness were most marked about 2 inches to the right of the umbilicus. Very little was to be felt by pressure in the right iliac fossa. On the fifth day he seemed much the same, but the temperature rose as high as 100.4° . On the sixth day it went up to 103° , his pulse-rate increased, and, as on the following morning his temperature was again up to 102.6° , it was decided to operate at once.

Operation for appendicectomy.—The incision was made nearer the middle line than usual, on account of the pain and tenderness to the right of the umbilicus. After opening the abdomen, an examination of this region first of all revealed some swelling, which, on further investigation, was considered to be enlarged lymphatic glands. A search for the appendix showed it to be situated over the brim of the pelvis, and directed downwards. It was bound down by recent adhesions, which were easily separated. The organ was amputated, the stump ligated with chromic gut, touched with pure carbolic, and freely dusted with iodoform. A narrow strip of gauze was tucked around the stump, and led out of the lower part of the abdominal incision. No pus was found, and, on examination, the interior of the appendix was found to be lined with an acutely congested mucous membrane.

The operation did not seem to be followed by any marked improvement; although the pulse kept fairly good, temperature continued high (102°), and on the fourth morning there was a rigor. On the tenth day he began to show marked symptoms

of delirium of a very noisy character. These continued and increased until his leaving the infirmary. The wound discharged a good deal of grumous-looking material from the time the packing was removed on the second day, but when dismissed there was very little discharge.

In his remarks upon the case, Mr. Maylard was of the opinion that the septic condition, which was apparently the true cause of death, had already started on its fatal course before the operation. There was nothing in the appendicectomy, nor in the subsequent condition of the wound, to explain the continuance of the high temperature. The extremely swollen condition of the mesenteric glands found at the operation, and the pain and tenderness to which they had given rise to the right of the umbilicus, probably explained that the septic virus had already reached these, and was being distributed over the system. The case was one which he thought showed how, where two attacks might be quite simple, the third might prove unpreventably fatal.

Dr. Alex. R. Ferguson described the condition of the brain as follows:—

The frontal lobes were submitted for examination. The greater part of the frontal lobe on the left side is occupied by a mass of recent blood-clot. Towards the edges, where this mingles with the brain, there is a mixture of greyish fibrine. The mass was carefully searched without finding any lesion of a small artery. Coursing over the surface of the brain are several veins, one of which is completely occluded by recent thrombus. No micro-organisms could be found in or around the lesion.

It was, nevertheless, considered that the lesion was in all probability of septic origin.

V.—FRESH SPECIMENS.

By DR. J. K. KELLY.—A specimen of parovarian cyst was shown, for comparison with the specimens shown at last meeting.

VI.—CARD SPECIMENS.

By DR. ERNEST G. FORTUNE.—Corpus luteum of unusual size (naked-eye and microscopical preparation).

By DR. JOHN H. TEACHER.—Similar preparations for comparison with above.

By DR. JOHN ANDERSON.—The following microscopical specimens:—(a) Carcinoma of brain of columnar cell type; (b) epitheliomatous nodules in pancreas, secondary to squamous cell epithelioma; (c) tubercle nodules from skin of leg.

By DR. D. O. MACGREGOR.—Skiagrams of feet showing well-marked arterio-sclerosis of anterior and posterior tibial arteries, as well as bony changes.

By DR. JOHN BARLOW.—A specimen of enteric intussusception successfully removed by operation.

MEETING III.—14TH DECEMBER, 1903.

The Vice-President, PROFESSOR ROBERT MUIR, in the Chair.

I.—FRESH SPECIMENS.

By DR. JOHN ANDERSON.—The liver, spleen, kidney, mesenteric glands, and bone marrow from a case of splenic anæmia. Dr. Anderson was asked to report the case in detail at a later meeting of the Society.

By PROFESSOR MUIR.—A carcinoma of the sigmoid flexure (lower end) with large secondary growths in the liver, which weighed 14 lb. The patient was only 23 years old, and the total duration of the disease was only three months. There was no jaundice.

II.—CASE OF ENTERIC INTUSSUSCEPTION IN WHICH ABOUT 15 INCHES OF BOWEL WERE INVOLVED: TREATED BY RESECTION: RECOVERY.

By DR. JOHN BARLOW.

The patient from whom the specimen was obtained was a boy, aged 10 years, and living in Motherwell. He was admitted into the Glasgow Royal Infirmary on 10th June, 1903, complaining of abdominal pain and of vomiting, of four days' duration. Ten days before admission, the boy is said to have had a chill. During the next seven days he was in bed, and the doctor in attendance said he was suffering from pneumonia. On 6th June, four days before admission, after taking a switched egg, patient was seized with violent abdominal pain, intermittent in character and attended with

vomiting. Since the pain started, the bowels had not moved. There had been no tenesmus, and no passage of blood or slime. On the 9th, after an enema, some blood was said to have come away.

On admission into hospital, his temperature was 97.3° F., and his pulse 120 per minute and weak. There was marked emaciation. The abdomen was distended, and painful on pressure, and there was some mottling of the skin on the anterior wall. No tumour could be felt; but percussion, with alteration of position, gave evidence of the presence of free fluid in the cavity. The case was regarded by me as one of septic peritonitis, due, probably, to some intestinal perforation.

On the evening of the day of admission, the abdomen was opened in the middle line, when a large quantity (over a pint) of turbid serum and pus escaped. The small intestine in view was greatly distended, and the coils matted together by lymph. A longitudinal incision was made in one of the loops, and the contents allowed to escape; while an examination was made of the right iliac fossa, in which the cæcum was found undistended and the appendix normal. In the cavity of the true pelvis was found an enteric intussusception—the specimen before you. The small incision was closed by a few sutures. Attempts were made to reduce the intussusception by combined traction and compression, but without success. Resection of the intestine involved was done, and the ends of the bowel were brought together by a Murphy's button. The abdominal cavity was flushed with warm saline solution, and the wound closed by silk worm stitches, except at the lower angle, where a glass tube was passed into the pouch of Douglas. In the later stages of the operation, strychnia was given twice hypodermically.

The after-history can be given very shortly. Stitch abscesses had to be attended to. The bowels were moved naturally on the 12th, thirty-six hours after operation. The button came away on the 18th, but it had been in the cavity of the rectum from the 16th, as a piece of silk attached to it protruded from the anal orifice on that day.

The boy was dismissed well on 3rd July, and I have seen him once since, when he was plump and well.

Professor Muir congratulated *Dr. Barlow* on the result of the operation. From examination of the preparation, he felt that *Dr. Barlow* had been wise in not attempting to unravel the intussusception. The intestines were very tightly impacted, and he was sure that more than 15 inches of them

were involved. It would have been interesting to know what local condition had caused the intussusception, but obviously this could not be ascertained without destroying the specimen, which Dr. Barlow was unwilling to do.

Dr. Parry and *Dr. Workman* discussed the rarity of this variety of the disease.

Dr. Nicoll recalled a case in which he operated successfully, and in which the intussusception was found on dissection (by *Dr. Teacher*) to contain 5 feet 2 inches of bowel. In this case, the cause was a nævoid polypus which, in the state in which it was found at the apex of the intussusception, was about the size of a pigeon's egg.

III.—TUMOUR OF THE PROSTATE REMOVED BY FREYER'S METHOD.

BY MR. R. H. PARRY.

Mr. Parry showed a large prostatic tumour removed by Freyer's method, from a patient aged 55, who had, for a period of two years, failed to pass urine voluntarily. The tumour consists of the entire gland, and the two lateral lobes are connected by a broad band, thus forming a channel which appears to be lined with mucous membrane. *Per rectum*, the tumour was easily felt, and at the operation it was seen to project considerably above the level of the floor of bladder.

There was nothing very special in the history of the case, beyond the fact that the patient was a marine engineer, and that the use of the catheter was attended by some danger, as well as being inconvenient to him at times. Acting on the advice of his medical attendant (*Dr. Penny, Rothesay*), he consented to operation. As regards the operation, which was performed on 23rd March, 1903, the detachment of the tumour was effected in the manner suggested by *Mr. Freyer*, and it is interesting to note that it was done in less than three minutes. Hæmorrhage was easily arrested by pressure and hot boracic solution. Urine was passed *per urethrum* the same day, and on 11th April, when the suprapubic wound was sutured, all the urine was passed *per urethrum*. On 17th April, he could retain his urine comfortably for four or five hours. He was dismissed on the 22nd, feeling well and greatly relieved.

Dr. Nicoll congratulated *Mr. Parry* on the result of his operation in this case, but said he could not accept the title given to the operation, viz., "Freyer's operation." His objection to the title was twofold. In the first place, he did

not admit that Freyer had originated any prostatic operation whatever; and, in the second, the operation which Mr. Parry had described did not correspond with either of the operations on the prostate which Mr. Freyer once claimed to have originated. Since entering the meeting, he had been asked by a member, "What is 'Freyer's operation'?" Freyer's present position is interesting, and it is of importance to grasp it. In March, 1900, Freyer published an operation which he called "A New Method of Performing Perineal Prostatectomy," by which he claimed that "Nicoll's objects" (referring to his operation) "are attained by a much less serious proceeding." As Dr. Nicoll pointed out (*British Medical Journal*, 24th August and 14th September, 1901), Freyer's claim could not stand, for, in the first place, it did *not* attain the "objects" in view, and in the second, it was *not new*. He had discarded it after trial, and it had been used by others years before Freyer rediscovered it. Next (in July, 1901), Freyer published a second operation, which he called "a new . . . operation for the radical cure of the enlarged organ, namely, total extirpation of the prostate." It will be recollected how a number of operators pointed out to Mr. Freyer that the entire hypertrophied prostate (as far as detectable by sense of touch) had previously been repeatedly removed, both by the suprapubic and the perineal routes. Freyer then altered his ground, taking a position which he covered by the words of Sydney Smith, to the effect that "That man is not the discoverer of any art who first says the thing; but he who says it so long and so loud, and so clearly, that he compels mankind to hear him," apparently forgetting that he (Freyer) had claimed to "say" both "things" (perineal and suprapubic) first. So much for the validity, on historical grounds, of the title "Freyer's operation," of which Mr. Parry had made use. The interest of the matter did not end there, however. Freyer claimed in the *suprapubic* operation, which he believed he had performed, to have done two things which seemed incomprehensible to those who had any knowledge of prostatectomy, viz., to have removed the prostate "in its capsule," and to have separated and left behind "intact" the prostatic urethra. This latter procedure Mr. Parry said he had reason to believe Mr. Freyer did not (as he erroneously supposed he had) accomplish. Mr. Parry did not carry it out in the case which he had detailed. He said it was impossible to follow Freyer's instructions, and it appeared to Dr. Nicoll that Mr. Parry, in using the title Freyer's operation for his case, desired to present Mr. Freyer with a *third* prostatic operation

to which Mr. Freyer—even Mr. Freyer—had made no claim. Mr. Parry had, of course, performed M'Gill's operation in this case, the prostate being shelled out by the finger; and an excellent operation it was for a certain number of cases, though not for all.

Dr. Workman enquired what became of the ejaculatory ducts and vesiculæ seminales; also, did the man become sterile.

Dr. John Gordon asked how the pouch left by the removal of so large a mass became filled up, and if Mr. Parry had ever seen insanity result from prostatectomy.

Mr. Parry, in reply, said that it was difficult to answer the criticisms of *Dr. Nicoll*, as *Mr. Shattock's* examination of *Dr. Freyer's* specimen, which showed that the prostatic urethra had been removed, only appeared recently, and there was as yet no reply from *Mr. Freyer*. He admitted that the operation resembled M'Gill's, but there was less cutting done, and it was easier to perform. He preferred not to discuss the matter further, as *Mr. Freyer* was quite capable of fighting his own battles. He was unable to say what became of the ejaculatory ducts or the pouch, as he had not had the opportunity of examining a case in detail after the operation. As to the question of sterility, the patient whose case he had described had had an erection since the operation. He had not seen or heard of insanity resulting.

IV.—LARGE FÆCAL CONCRETION WHICH WAS LODGED IN THE CÆCUM, AND WHICH NECESSITATED EXCISION OF THE CÆCUM.

BY MR. R. H. PARRY.

Mr. Parry showed a cæcum containing a large fæcal concretion. The diagnosis, prior to operation, was that of carcinoma of the cæcum, and it was based on the following symptoms which were present:—Obstinate constipation, the passage of tarry stools, colicky pains, peristalsis, emaciation (2 st. 10 lb. lost within a year), cachexia, and the presence of a large firm mass in the right iliac fossa, which had been observed for about seven months.

On opening the abdomen, the appearance and character of the mass still suggested carcinoma, and therefore excision of the cæcum was decided upon.

Maunsell's method was adopted, but it did not seem to offer any advantage over end-to-end union. Drainage being considered necessary, owing to considerable oozing, a glass tube

was introduced through an opening in the back, just above the crest of the ilium. Three days later, a slight discharge of faecal matter was noticed coming through the tube, but it ceased in the course of three or four days. Patient was dismissed in the fifth week, quite well.

The concretion was found to consist entirely of faecal matter, and there was no evidence of congenital malformation of the caecum.

Dr. John Anderson reported that the mucous membrane was somewhat atrophied, and the muscle somewhat thickened at the edge of the dilatation in which the concretion lay. The concretion was purely faecal, and did not contain either animal or vegetable hairs.

Dr. Anderson has since reported that the thickening below the concretion proved, on microscopic examination, to be of carcinomatous nature.

V.—CASE OF SUDDEN DEATH FROM EMBOLISM OF THE LEFT CARDIAC CORONARY ARTERY (DEATH OCCURRING WITHIN A MINUTE OF THE SEIZURE).

By DR. J. LINDSAY STEVEN.

Dr. Lindsay Steven's paper appears as an original article at p. 107.

VI.—ORTOL REACTION FOR MILK.

By DR. CARSTAIRS DOUGLAS.

Dr. Douglas communicated a short note on the "ortol" reaction in milk, and demonstrated the test. It consisted in the addition of ortho-methyl-amino-phenyl-sulphate (conveniently obtained in the photographic reagent ortol), and a little peroxide of hydrogen solution, when, in the case of unboiled milk, a brick-red or crimson colour at once develops. Milk which has been raised to a temperature of 75° to 80° C. no longer exhibits the reaction, but it is given by ordinary pasteurised milk done at 70° C. The reaction was described by Dr. Saul in the *British Medical Journal* of 25th March, and is both striking and simple. The red colour is discharged by alkalies, but not by acids, and, therefore, is given by sour milk.

It is not due to any of the ordinary constituents of milk, and Saul suggested it might be due to an oxidising ferment,

destroyed at a high temperature. Dr. Douglas said he was inclined to support that view, as he had obtained the reaction from other ferment-containing bodies, such as saliva, peptic and pancreatic extract, and malt diastase. He thought that it was likely that the valuable anti-scorbutic properties of milk were due to this and similar bodies, and he thought this applied also to other foods useful in scurvy, such as meat-juice, fruits, and vegetables.

In conclusion, he thought this matter had some bearing on infantile scurvy or "Barlow's disease." It had not been shown that the use of ordinary pasteurised milk had increased the number of the cases of this rare disease (Rothschild and Abramoff), but there certainly was evidence that there had been an increase where proprietary foods and milk sterilised at a high temperature were habitually employed. Might it not be the case that this result happened because of the destruction of a valuable ferment? Rothschild and Abramoff had suggested that auto-peptonisation took place through organisms and in the early stages of sterilising milk, but the speaker had not been able to detect peptones in milk even when sterilised three times over.

Professor Muir remarked that the reaction appeared to depend upon bodies which possessed a labile character, analogous to that of the serum complements concerned in the processes of bacteriolysis and hæmolysis. For example, by testing for the presence of complement it would be quite easy to say whether or not a serum had been heated to 60° C. We were just at the beginning of research as to their nature, and every reaction which could help to determine their presence and elucidate their nature and properties was interesting and important. He asked whether the property could be restored to pasteurised milk by the action of bacteria.

Dr. Workman also enquired whether sour milk gave the reaction of fresh milk.

Dr. John M. Cowan referred to the fact that cases of infantile scurvy are being recorded in Paris, and are being attributed to pasteurised milk. He thought that too little attention was being paid to the exact temperature which was used in pasteurisation—it ought not to exceed 70° C., which, as Dr. Douglas had pointed out, did not destroy the bodies which gave the ortol reaction.

Dr. Douglas, in replying, stated that, naturally soured milk gave the reaction. He would investigate the action of bacteria.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1903-1904.

MEETING V.—18TH NOVEMBER, 1903.

The President, DR. C. R. M'LEAN, in the Chair.

I.—CEREBRAL ABSCESS (TEMPORO-SPHENOIDAL LOBE) CONSEQUENT ON LONG STANDING MIDDLE EAR DISEASE.

II.—SYPHILITIC NECROSIS OF FRONTAL BONE WITH SLOUGHING OF DURA MATER AND OF PORTION OF FRONTAL LOBE, FOLLOWED BY HERNIA CEREBRI.

BY DR. JOHN PATRICK.

Dr. Patrick's notes on these cases will appear as an original article in a future issue of the *Journal*.

III.—MEDIASTINAL TUMOUR.

BY DR. JOHN PATRICK.

This patient, a man, æt. 45, suffered from symptoms pointing to chronic bronchitis; this condition was treated in turn by stimulating and sedative cough mixtures, with but little benefit. The cough remained obstinate, and was accompanied by a purulent sputum. Latterly, dyspnoea and a loud wheeze supervened. About this time enlarged veins appeared on the abdomen, chest, and back. Percussion revealed dulness of a pronounced nature over the upper third of the right lung, suggestive of mediastinal tumour. As to the diagnosis, the tumour had been of rapid growth and of four months' duration, and the question of sarcoma or lympho-sarcoma had been raised. It was probably the latter.

Treatment.—The patient had been put on iodide of potassium, but he seemed to improve more on mercury. The prognosis was obviously bad.

Dr. Patrick showed a series of excellent stereoscopic views illustrating the extreme enlargement of the abdominal and thoracic veins. Several photographs obtained by x-rays, and prepared by Dr. James R. Riddell, were likewise shown to

demonstrate the solid nature of the tumour, which occupied practically two-thirds of the right lung.

Dr. T. K. Monro said he was much interested in the case termed *syphilis tarda*. The diagnosis, he thought, would be more assured if it could be established that this man of 38 years had not acquired syphilis. With reference to the mediastinal tumour, he had been struck with the great dilatation of the anastomosing tributaries of the inferior and superior venæ cavæ. It was remarkable to see such dilatation and yet no œdema of the upper limbs; it was also very uncommon to see such large veins on the back of the chest.

Dr. W. Findlay congratulated *Dr. Patrick* on his group of cases, and on the very interesting and masterly way in which they had been described. The syphilitic case was to him a staggering one. He thought that the poison would have passed out of the system before that lapse of time, even in the case of inherited syphilis.

Dr. Wm. Patrick said he had seen cases of abscess of the brain in his earlier days, but they soon died. With the advance in surgery, many lives were now saved.

Dr. John Patrick said, in reply, that so far as he could ascertain, the man suffering from *syphilis tarda* had never exposed himself to the risk of infection. The patient thoroughly understood the nature of the lesion, and had attended the dispensary for a year and a half. Notwithstanding *Dr. Monro's* doubts as to the diagnosis, he was still of opinion that the disease in this case was latent, and he had further to point out that these tertiary symptoms were well known to appear often at puberty.

IV.—PAGET'S DISEASE OF THE NIPPLE.

By *DR. JOHN A. C. MACEWEN.*

The patient, a woman, æt. 47, was seen by *Dr. Macewen* in consultation with *Dr. M'Farlane*, of Maybole. The history given was that for eighteen months she had suffered from eczema of the nipple, which improved now and again under treatment, but invariably relapsed.

The left breast was normal in every way. The affected nipple was smaller than the other, but it was not retracted. The affected areola was white and waxy, and so was the nipple. A little moisture appeared. There was no enlargement of axillary glands.

The question was how to treat this intractable eczema.

Having in mind that it was a case of malignant disease, it was decided to remove the entire breast; care was taken not to cut through any unhealthy skin.

Dr. Macewen said the operation might have been too heroic, but the object was to guard against recurrence. The patient went home one month after the operation.

The breast removed was shown to the Society, and stained sections were placed under the microscope.

The microscopic specimens prepared from this case showed carcinomatous infiltration. The ducts, cut transversely, also showed infiltration. In many of the ducts *psorosperms* were seen which were of a parasitic nature. Modified tissue, seen at a deeper level, showed the same infiltration. This went to show that when there were as yet no signs of carcinoma visible to the naked eye, one would find malignant conditions in the ducts. In connection with this aspect, he quoted a case reported by Dr. Munro, of Kilmarnock, where a woman who suffered from this condition was cured of the eczema, but carcinoma supervened in the breast, from which she died, no operation being performed.

Paget's theory was that the tumour which develops in these cases is of a scirrhus nature, and he took a gloomy prognosis, but this was probably due to non-operation. It was further to be observed that Paget only removed the affected skin. Dr. Thin, however, considered that it was a disease of the ducts, characterised by round-cell infiltration into the skin round the ducts. It was thus evident that sooner or later it must be considered as duct cancer, and unless the case was got very early, removal of the skin alone would do but little good, as the disease had already extended along the ducts, and removal of the areola, &c., must be effected even before a tumour was seen.

Most observers were agreed as to the intractability of the late eczema in these cases. As an aid to diagnosis, Dr. Macewen suggested that a scraping of the skin could be made, and examined for *psorosperms*. He desired information as to the prevalence of eczema of the breast in women over 40, and persisting for from one to four years; and as to the proportion of cases in which carcinoma developed in after years.

Dr. W. L. Muir referred to a case occurring in a farmer's wife, some fifteen years ago. When seen by him, the patient was suffering from an angry eczematous condition round the nipple. Her local doctor told her it was cancerous. Dr. Muir was of opinion, in view of the acute inflammatory condition,

that it was not malignant; and in two or three weeks it cleared up under treatment. When he saw her five years ago she was well, and, so far as he knew, she was still alive.

Dr. Service said he had a case of dermatitis of the breast under his care three years ago. The breast was excised in the Western Infirmary. Prior to operation, the pathologist's diagnosis was that of inflammatory tissue, but he had heard nothing further of the patient.

Dr. John Patrick had seen one case of eczema of the nipple, which had been treated by many doctors. He advised operation, but the patient disappeared. It was obvious that Paget's disease was very rare.

Dr. C. R. McLean had met with a typical case five years ago in a woman of 50. He saw her repeatedly. There was an excoriated sore, with granulating tissue. She was operated on in the Glasgow Royal Infirmary. Nothing was found in the axilla. There was no recurrence, and the patient died eventually of another disease.

Dr. Macewen, in reply, said he was glad to learn that in private practice eczema of the nipple in women over 40 years of age was rare, even apart from Paget's disease.

GLASGOW NORTHERN MEDICAL SOCIETY.

THE third meeting of this session was held on 1st December, 1903—the President, Dr. A. T. Campbell, in the chair.

DR. HINSHELWOOD read a paper on "Some Observations on Ocular and Other Forms of Chronic Headache," which will be found *in extenso* in our issue for January, 1904, at p. 7.

DR. CONNAL next read a paper on "Suppurative Middle Ear Disease." In acute otitis media, with pain, temperature, and bulging of the membrane, the tympanic membrane should be freely incised, and the secretion mopped out from the canal with cotton-wool. If the discharge is profuse, use antiseptic syringing and drying. After the acute symptoms have subsided, inflation of the middle ear, to prevent adhesions forming, should be performed.

If, after rupture of the membrane, pain continues, and examination shows a small perforation, the opening should be enlarged. If, with pain, there is profuse discharge and tenderness to pressure over the mastoid, with deformity or swelling,

pus in the vertical cells of the mastoid, urgently requiring operation, should be suspected.

In chronic middle ear disease, antiseptic syringing and thorough drying with cotton mops is to be recommended. Granulations and polypi should be removed with the snare, ring knife, or curette, and dilute spirit instilled into the ear. Where there are granulations over carious bone, a radical mastoid operation should be performed, unless the carious area is very limited in extent.

In perforation of Schrapnell's membrane, if there be localised disease in the ossicles or adjacent bone, within reach, the ossicles should be removed, and the part curetted. If the foetid discharge persist, or if there is carious bone beyond reach, or within reach but involving a considerable area, the radical mastoid operation should be performed.

Mastoid periostitis, in chronic cases, is generally due to erosion of the bone, and pus making its way to the surface. Here the radical mastoid operation should again be advised. Sometimes, in acute cases, no carious erosion can be discovered—simple incision down to the bone will be sufficient here.

Facial paralysis, in cases of chronic purulent ear disease, if on the same side as the affected ear (peripheral), indicates the radical mastoid operation. If on the opposite side from the affected ear, and accompanied by other symptoms of intracranial disease, it may denote abscess in the brain—generally temporo-sphenoidal abscess.

Facial paralysis, in acute cases, may point to pressure on the exposed facial nerve, but, if accompanied by enlargement of glands in front of the ear and in the neck, may denote tubercular ear disease.

In arriving at a diagnosis of intracranial tension, pain, temperature, pulse, sickness, vomiting, mental condition of the patient, giddiness, hiccough, yawning, optic neuritis and optic disturbances have all to be considered. Where in doubt, if there is pain, with cessation of discharge, and local causes can be excluded, the mastoid should be freely opened, any pus track being followed up. If none be found, the part should be packed for a day or so, and one should then wait for localising symptoms to develop, or, if it be considered advisable, as in urgent cases, an exploratory puncture of the brain may be performed.

Dr. Connal illustrated his remarks by some excellent specimens and stereoscopic photographs.

REVIEWS.

Handbook of Physiology. By W. D. HALLIBURTON, M.D.
Fifth Edition (being the Eighteenth Edition of *Kirkes' Physiology*), with upwards of Seven Hundred Illustrations, including some Coloured Plates. London: John Murray. 1903.

SINCE the editorship of this popular handbook was taken up by Professor Halliburton in 1896, three completely revised editions have been published, and now, owing to the exhaustion of the last issue of 1901, a new edition has been prepared. This is practically a re-issue of the last, with some slight changes in the parts referring to digestion and the nervous system. To facilitate rapid publication, however, the new matter has, for the most part, been simply tacked on as an appendix of some twenty-four pages, which, like the postscript of a letter, contains the cream of the matter, and allows the student to see at a glance the paths in which advances have been made in the last few years. It will also be noticed that the book now goes under the name of Dr. Halliburton, by whom it has been remodelled and brought up to date.

The arrangement of the work is that generally followed—a general introduction, chapters on the animal cell and tissues, the physiology of muscle and nerve, the circulation, the lymphatic and ductless glands, respiration, the blood, food and digestion, absorption, secretion and excretion, general metabolism, animal heat, the nervous system, sensation and the special senses, voice and reproduction. In all parts, it may be said, the latest and most accurate views are clearly and succinctly stated, and where any recent advance has been made the student is referred to the appendix, which again relates mainly to digestion and the nervous system. In it we find paragraphs on reflex salivary secretion, showing the adaptation of the secretory process to the needs of the animal; on the secretion of the pancreas and how its composition varies according to the nature of the food supply; on secretion and the investigations of Starling and Bayliss. Much new light is shed on the succus entericus, which is seen to be by no means so unimportant as supposed in the older text-books. Pawlow showed how it reinforces and intensifies the action of the

pancreatic juice, especially as to its proteolytic power. It secretes a substance, enterokinase or zymolysin, which influences the tryptic ferment, and a substance, erepsin, which breaks down proteoses and peptones. So interesting are the links in the chain that a short synopsis may be quoted. "The acid gastric juice reaches the small intestine, and there produces secretion from its forerunner; the secretion is taken by the blood stream to the pancreas, where it excites a flow of pancreatic juice; this juice arrives in the duodenum ready to act on starchy substances and on fat. By splitting the fat, fatty acid is liberated, which, in its turn, forms more secretion, and so more pancreatic juice. The pancreatic juice, however, cannot act on proteids without its complement, zymolysin, which is supplied by the succus entericus; this sets free the trypsin; trypsin splits the proteids into proteoses, peptones, and a small amount of leucine, tyrosine, and the like, and the final breakdown of the proteoses and peptone into such simple substances is accomplished by erepsin." The interesting law of Schütz is stated that the amount of activity of an enzyme is proportional to the square root of the amount of enzyme present. Further description of intestinal movements is given. Modern ideas in regard to osmotic phenomena and the action of ions are somewhat fully discussed, and their importance from a physiological standpoint illustrated in respect to lymph formation, gaseous interchanges in the lungs, absorption, and formation of urine. In regard to the nervous system the chief points dealt with are the reaction of degeneration, fatigue of nerves, cerebral localisation, function and myelination, association fibres and association centres, and Flechsig's recent results on myelogenesis.

The book is carefully edited and well illustrated, and is to be heartily recommended as a handbook for students or those who wish to know the outlines of physiology in their most recent aspect.

Les Obsessions et la Psychasthénie. Par Profs. T. RAYMOND et PIERRE JANET. Avec 22 Gravures dans le Texte. Paris: Felix Alcan, Editeur.

THIS work is the fourth of the series issued from the Psychological Laboratory of the Saltpetriere Clinique. It is the complement of the second volume of the series, "*Les Neuroses et les Idees Fixes*," in that the same cases are narrated in both volumes from different standpoints. The present work is

concerned more with the physical features than with the psychological aspects. The experience of the authors has been the means of enhancing the value of the work under review. It contains a more detailed category of cases, and at the end of each case the evolution of the illness is restated; in this way the scattered details of lengthy chapters are united.

The subjects dealt with are grouped under two headings—the first embraces those cases in which there is a diminution in mental activity; the second part deals with obsessions.

Psychasthenia, a word suggested by its physical equivalent neurasthenia, is applied as a generic term to all the cases in which there is a diminution in mental activity. Five types of psychasthenics are distinguished—first, simple neurasthenia, with bodily troubles and moral depression, but no pathological feelings; second, the existing mental depression is felt acutely and there are tendencies to exaggerate and generalise the feelings; third, in addition to the above noted symptoms, diffuse agitations are present in the form of emotional and motor excitement arising especially in crises. The fourth type of patient has the motor or mental agitations systematised in such a manner that they are called forth by a repetition of the movements, mental pains or mental exertions (apropos of certain events), which originally produced the agitation. The fifth class have all the troubles grouped under the preceding types, and, in addition, present crises of obsessions of disease, of shame, of crime, of sacrilege, &c. These obsessions are not permanent, though in some cases, instead of appearing in crises, they are more or less continuous. The fifth class of patients may ultimately and even readily pass into the category of the cases dealt with in the second part of the work, namely, obsessions. The varieties in obsessions depend a good deal on the character of the affected person and his former education. Three classes are distinguished by the authors, according as the result is chiefly motor, emotional, or intellectual. Motor obsessions are rare, and when pure are least serious. Emotional obsessions concern themselves with the diffuse anguishes and fears, fears of functions approaching to fears of disease and of death. The authors point out that this particular class of cases is apt to be confounded with hypochondriacal melancholia. It is distinguished from this affection in that the delusions of obsessing persons never reach the point of absurdity, and the affected persons are unable to execute their thoughts in action, *e.g.*, a young woman, with obsessions of sexual crimes, never attempts to carry these thoughts to their

logical conclusion. The third class of obsessions concerns itself with obsessions of crime, of crime in the form of impulse, in the form of remorse, and obsessions of shame, love, and sacrilege. The authors are of opinion that it cannot be too often insisted on that psychasthenics are not insane in the ordinary sense of the term. They have lost the higher faculties of mind, but always retain memory and judgment. Lest, however, it might be concluded, that there is an absolute separate gulf between the class of psychasthenics and the insane, a third chapter is added to the work, containing observations of a number of obsessing persons who have developed true insanities, especially in the form of mental confusions and systematised delusions. In considering the treatment adapted to the varieties of the complex mental cases unravelled in the work, the authors do not delude themselves with the hope of warring successfully with pathological states, which have so often their causation in heredity and in the constitution even of the individual. They produce abundant evidence, on the other hand, that treatment often averts the development of the disease, which, if left to itself, is progressive and often dangerous. The treatment generally adopted is that inspired by all the rules necessary for good bodily health, the regulation of nourishment, a constant war against auto-intoxications arising especially in the genital organs and intestines. Above all moral treatment is effective change of surroundings, simplicity of life, direction of mind, exercise of the will power, of the attention, of the emotions, often remain the best means of treatment. The authors have often been surprised to see how the minds of these patients, in appearance so obstinate, are in reality flexible and able to be modified. In most cases patients are able to feel the falseness or emptiness of their fears, and that their ideas are founded on pathological feelings. The exaggeration of these feelings disappears when the inherited nervous tension is relieved under the influence of care and attention.

Many striking facts are elicited in this work, which, clearly and lucidly written, cannot fail to engage the interest and the attention of the reader. The cases are collected and gathered with care, and form a record of great value to all interested in mental problems of the highest complexity.

Almost all the research of any importance into the vague borderland of cases that hover between sanity and insanity has been made by French observers, and the experiences here recorded by distinguished authors cannot fail to add to the work of their predecessors.

The Prevention of Consumption. By ALFRED HILLIER, M.D., C.M., B.A. Revised by PROFESSOR R. KOCH. With Illustrations. London: Longmans, Green & Co. 1903.

THIS is an important little work, which is designed to supply much needed instruction to the lay public as well as to the medical profession. It contains chapters on the history and nature of tuberculosis; on infection, including transmission from man to man; on the relation of bovine to human tuberculosis; on personal precautions; on prevention by legislation and public action; and on sanatoria, homes for advanced consumptives, and open-air colonies. A lengthy appendix contains much additional information.

As might be expected under the circumstances, Dr. Hillier shows a strong leaning to Koch's view that bovine tuberculosis is comparatively innocuous to man. This opinion may or may not be correct, but as one of the principal arguments urged in its favour is the alleged extreme rarity of primary tuberculosis of the intestine, we may remark that this does not give sufficient weight to the extreme frequency of tuberculosis of the mesenteric glands. These glands are very often diseased although no lesion of the intestine is present, just as in children the bronchial glands are often diseased without any pulmonary lesion, and the cervical glands are often infected by way of the tonsils though the latter themselves escape. At the same time, we do not admit that in this country primary tuberculosis of the intestine is rare in children; and it is very likely that in them infection may sometimes be due to the bacillus of bovine tuberculosis.

The Diagnosis and Modern Treatment of Pulmonary Consumption. By ARTHUR LATHAM, M.A., M.D. London: Baillière, Tindall & Cox. 1903.

THE early diagnosis of phthisis pulmonalis and its successful treatment by the open-air method is, at the present moment, a subject of special interest in the medical profession. And a book such as this by Dr. Latham, which deals with these aspects of the disease in a judicial and practical manner, must be opportune, and will be read by a wide circle of readers. It cannot be said that Dr. Latham has anything fresh to tell us in regard to pulmonary consumption; his aim has rather been to gather together such observations as are already before the

profession, and sifting them, to set down in a clear and concise manner the points which should guide us in the diagnosis and treatment of the disease. He makes no attempt at explaining the physics of the physical signs, nor does he discuss in any detail the pathology of the tubercular process, for the scope of the work evidently limits itself to the clinical point of view. For the book, as it stands, we have nothing but praise, and the only fault we would find is that its scope is not wider. The subject of prognosis is of such great importance that more space might well have been devoted to it. Doubtless, it is most difficult to give with confidence a definite prognosis in almost any case of phthisis, still there are certain groups of cases which are habitually more serious than others, and certain general rules which guide us in judging such; this aspect of the subject might well have been more fully considered, not only from the point of view of prognosis, but also in regard to the duration of the treatment. The observations in regard to tuberculin are most interesting, but if it is used for diagnosis, why not also to determine if the patient has been cured? If by such a means we could differentiate between the real and the apparent cures, we should be in a much better position to advise the patient as to the conduct of his life in the future.

A Handbook of the Open-Air Treatment and Life in an Open-Air Sanatorium. By DR. CHARLES REINHARDT and DR. DAVID THOMSON. Second Edition. London: John Bale, Sons & Danielsson, Limited. 1902.

THIS book gives an account of the open-air treatment of consumption, and a description of the various sanatoria at present in existence in the British Isles. It is essentially a popular work, and will appeal more to the general reader than to members of the medical profession. It is profusely illustrated with pictures of many different sanatoria and their surroundings.

Constipation. By G. SHERMAN BIGG, F.R.C.S.E. London: Baillière, Tindall & Cox. 1902.

THE author has written this treatise in the hope of drawing attention to the widespread prevalence of constipation, and the important part that this ailment plays in the causation of

disease; showing that it is not confined to one class or to one age, that it may exist almost from birth, and may prove a source of trouble to those who have reached a ripe old age; that it affects the rich and the poor, the idle and the industrious, the brain worker and the manual labourer.

The writer differentiates simple, habitual, and chronic constipation, and proceeds to discuss the treatment under the heads of Habit, Diet, Fluids, Massage, Purgatives, and Exercise.

The volume is a small one, but it treats of a broad subject in a comprehensive manner. Dr. Bigg has succeeded in placing his facts in plain, well chosen language, which, however, will appeal not so much to medical men as to the laity, for whom it is more obviously written. The commonsense guiding principles of life laid down by the author in his book should have a healthy educative influence upon his readers.

The Blood: How to Examine and Diagnose its Diseases.

By ALFRED C. COLES, M.D. Second Edition. With Six Coloured Plates. London: J. & A. Churchill. 1902.

THE first edition of this work gave evidence of the writer's grasp of the importance of hæmatology in the clinical study of disease. The very favourable reception accorded to his book, as stated in the preface, has justified the belief that a small book dealing particularly with the practical methods of, and the clinical deductions obtained from, the examination of the blood would prove of service.

A perusal of the volume demonstrates that the author is thoroughly up in the technique of fixing and staining films, and in interpreting the significance of the corpuscular changes in certain pathological conditions. We congratulate him on having incorporated in this edition the views of various recent workers in this field of research, so that he has been able to present to his readers a book replete in its freshness.

The section on pernicious anæmia has been carefully written. It is pointed out that recent English writers are still at variance as to the nature of pernicious anæmia. Thus, Professor Stockman maintains that pernicious anæmia is not a disease in itself, but a symptom of several exhausting conditions which induce an initial anæmia, followed by degenerative changes in the vessels, resulting in capillary hæmorrhages which, in their turn, cause the excessive anæmia; whereas Dr. Wm. Hunter holds that pernicious anæmia is a specific

disease in which the blood is destroyed in the portal circulation, and excess of iron is deposited in the liver as a result of this hæmolyxis.

The section on malarial parasites takes up 26 pages. There has hitherto been some difficulty in determining the best method of recognising these minute organisms in examinations of the blood of malarial patients. We are pleased to state that the technique described by Dr. Coles will be found an easy and useful one. Some directions are likewise given regarding the examination of the blood for embryo filariæ.

In the *résumé* of the condition of the blood in typhoid fever, Dr. Coles states that "the coagulation of the blood is unaltered." We cannot agree with this statement.

In recent investigations as to the coagulability of the blood in enteric fever, our observations clearly show that there is a decided and unmistakable alteration in the rate of coagulation, the difference in some cases exceeding two minutes. We have gone into this matter very fully, as it has a direct bearing upon therapeutics. In the early stages of enteric fever the coagulability of the blood may be reduced by the toxins of the disease, but once these cease to act, the large quantities of milk on which the patient is fed tend to render the coagulability excessive, and thus thrombosis may occur. As a prophylactic against this intravascular thrombosis, it has been suggested that, when the period of tendency to perforation is over, the patient should be put upon citric acid, in the form of a citrate, to prevent further thrombosis. Apart, however, from this divergence of results in the case of enteric fever, we have nothing but the heartiest commendation for this excellent work by Dr. Coles.

The book is printed in good, large, clear type. The plates are well executed, and the volume, as a whole, will be found most valuable by all who are engaged in the clinical examination of the blood.

Diseases of the Ear. By EDWARD BRADFORD DENCH, Ph.B., M.D. Third Edition. New York and London: D. Appleton & Co. 1903.

AFTER a careful perusal of this handsome volume, the opinion come to is that it is a very complete and reliable text-book of diseases of the ear.

It is divided into six sections, as follows:—

1. The anatomy and physiology of the ear.

2. Diseases of the conducting apparatus—subdivided into (a) diseases of the auricle; (b) diseases of the external auditory meatus; (c) diseases of the middle ear; (d) diseases of the mastoid process, with intracranial complication.

3. Surgery of the conducting apparatus.

4. The surgical treatment of intra-cranial complication of aural suppuration.

5. Diseases of the perceptive mechanism.

6. Complicating aural affections—with diseases of the nose and naso-pharynx which affect the sense of hearing.

The subjects dealt with in those various sections are treated in detail in numerous separate chapters.

Throughout the book there is abundant evidence of the full and practical knowledge of the subject on the part of the author, as well as of his ability to express clearly what he desires to say. He takes a broad view of his subject, and never loses sight of the fact that many diseases of the ear are but local manifestations of some systemic condition. The work can be heartily recommended to those who desire to possess a complete and practical treatise on the subject.

Introduction to the Study of Malarial Diseases. By DR. REINHOLD RUGE: Translated by P. EDGAR, M.B., C.M., and M. EDEN PAUL, M.D., M.R.C.S., L.R.C.P. London: Rebman, Limited. 1903.

The Malarial Fevers of British Malaya. By HAMILTON WRIGHT, M.D. London: J. & A. Churchill. 1902.

Inoculation Against Malaria. By DR. PHILALETES KUHN; Translated by H. A. NESBITT, M.A. London: H. K. Lewis. 1902.

THESE three publications deal with the subject of malaria from entirely different points of view. The first may perhaps best be described as a concise text-book, in which is given an account of the etiology, symptomatology, and pathology of the disease. The book is quite up-to-date, and it gives in reasonable space all that one requires to know to recognise and treat the various forms of malaria. The mosquito, too, is described with much detail; and with the aid of the excellent illustrations, which greatly elucidate the text, the reader should have little difficulty in recognising the species to which any individual form may belong.

The second book confines itself to a consideration of malarial fever as found in the Malay peninsula. Dr. Wright has examined 251 cases of fever, which he classifies as follows:—Malignant tertian, 93; benign tertian, 78; quartan, 56; pigmented quotidian, 22; and unpigmented quotidian, 2. These figures he considers a fair indication of the proportions in which the various malarial fevers prevail in British Malaya. The different forms above enumerated are shortly discussed, and the preventive measures suitable for use in the peninsula are fully considered. The book is essentially clinical, and contains the records of a considerable number of interesting cases; and, taken as a whole, it cannot but be regarded as a most useful contribution to our knowledge of malaria.

The third publication is little more than a pamphlet. It argues that there is a very close connection between malaria and horse-sickness, and, indeed, Dr. Kuhn considers the two as being different forms of the same disease. He claims he has discovered a serum "which is able at the same time to heal the disease (horse-sickness) after it has broken out, and also to bestow temporary immunity to a tolerably high degree." This same serum has been used for the treatment of malaria, with, the author claims, excellent results. The paper is very suggestive, but details as to the nature and preparation of the serum are lacking; and generally the method of treatment apparently is only on trial, and it is premature to give any definite opinion as to its utility.

Genito-Urinary Surgery and Venereal Diseases. By J. WILLIAM WHITE, M.D., and EDWARD MARTIN, M.D. Fifth Edition. Philadelphia and London: J. B. Lippincott Co. 1902.

IN this edition the authors "have added to the text only such practical modern procedures as our own experience and judgment have shown to be of distinct value."

The various portions of the work, which we have subjected to scrutiny, show not only careful attention to detail, but the matter is written in a style which is easy to read. In most instances the authors' meaning is perfectly plain; thus, the description of the treatment of hypospadias—called here "hypospadia"—is a model of clearness. On the other hand, we must confess to being unable to get at the authors' opinion as to whether pachy- or lepto-meningitis is more common in

cerebral syphilis. Again, the opinions expressed as to treatment are not always those which meet with universal acceptance. For example, the strong belief in the efficacy of castration in the treatment of enlarged prostate (p. 996); again, the recommendation to divide the stricture when making incisions for urinary extravasation (p. 216); and, again, in their strong pronouncement in favour of the bacterial causation of urethral fever (p. 252); while in the treatment of progressive fever, perineal drainage is recommended in spite of its dangers (p. 255); and no mention is made of suprapubic drainage.

We would specially draw attention to the most valuable summaries of treatment to be found at the conclusion of various chapters, while the closing chapter of the book, on sexual psychopathia, deals with that subject in a manner highly to be commended, avoiding, as it does, filthy details.

The volume is liberally illustrated, and is well got up, and we can cordially commend it to our readers, as, despite its somewhat ponderous bulk, it does not allow the attention to flag at any part in the course of perusal.

That it has reached a fifth edition in the course of five years is testimony, not only to the worth of the work, but to the good judgment of its readers.

The Surgical Diseases of the Genito-Urinary Organs. By E. L. KEYES, M.D., and E. L. KEYES, Jr., M.D. New York and London: D. Appleton & Co. 1903.

THE sub-title of this work is "A Revision of Van Buren and Keyes' Text-Book," and in the preface we are given the following account of its pedigree:—"The present volume "has lived through three generations, both in its presentation and in its authors, the infusion of new blood saving it from the imputation of 'senectitude.'"

Syphilis and sexual psychoses are excluded, but gonorrhœa is fully considered.

In this book there is much that is good, and much that calls for criticism. The descriptions of the various ailments are clear and concise; the treatment—principles and details—is carefully explained, *e.g.*, instructions as to the passage of urethral instruments, various operative measures, and the treatment of gonorrhœa. The description of infantile hydrocele is not borne out by fig. 170, which is twice referred to

(pp. 757 and 765). The section on bacteriuria is good, also that on extravasation as a result of stricture. The subject of "urethral chill" is treated very fairly; the authors steer a middle course between the conflicting opinions as to its causation. The treatment of hydrocele by carbolic acid injection is well recognised by many surgeons in this country, but few, we think, would wax eloquent over the method, as do the authors on p. 762, in language and style forcibly reminding one of an advertisement of a fail-me-never patent remedy. The remarks on the injection of iodine we entirely dissent from. The opinion as to the uselessness of local remedies, and the worse than useless castration, in tuberculosis of the testicle, will not, we fear, meet with much support; nevertheless, these views are given without a trace of hesitation. The operative treatment recommended for varicocele is subcutaneous ligation. The authors see "little good" in castration as treatment of enlarged prostate; their conclusions as to choice of operation are found on p. 313; this section of the book we would call attention to as well done.

Above all others, in a work on the genito-urinary organs, the writer should endeavour to treat the subject in a dignified manner; we cannot too strongly condemn the use in this volume of slang expressions, such as "rounder," "urethral past," "dyspeptic about the genitals," &c. The following sentence speaks for itself:—"When cancer involves the deep urethra, the part played in the drama by the mild accompanying urethritis is too subordinate to be billed."

We regret the above flaws, which spoil what is otherwise a first-class work, and one that we can recommend to every practitioner. Those who consult it will find it to contain a wealth of information on subjects in the domain of genito-urinary surgery.

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon. By JAMES P. TUTTLE, A.M., M.D. New York and London: D. Appleton & Co. 1903.

THE author of this book is professor of rectal surgery in the New York Polyclinic Medical School and Hospital, and he has conducted a clinic in his special subject for the past twelve years. He has had presumably a large experience of actual cases, and is therefore entitled to ask our attention to his written work. Those who comply will find that their time has not been wasted, and that they have in their possession a

look full of good matter, easily assimilable, and withal far from superficial.

The arrangement is good. The embryology, anatomy, and physiology lead up to malformations. The methods of examination and diagnosis are gone into, and then follow diseases, beginning with inflammatory, simple, and specific. Ulceration, abscess, fistula, stricture, constipation, piles, prolapsus, and tumours come in succession; about one hundred pages are devoted to operations: foreign bodies, wounds, and nervous affections are next considered; and the work closes with a short chapter on rectal alimentation.

In the various chapters, besides going fully into the labours of others, quoting their views, and giving references to literature, we have the benefit of the author's criticism and the results of his own experience. This is well-exemplified in the sections on abscess, fistula, and stricture, and the *résumé* on the treatment of the last is eminently judicial. We must confess to a difference of opinion with Dr. Tuttle as to the treatment of piles by the ligature. This, if properly performed, we consider, from a fairly long experience, as an eminently satisfactory method of treatment. As regards the subsequent pain, we believe that idiosyncrasy plays a not inconsiderable part, while the necessity for catheterisation has been, in our hands, far from universal. Suppurating affections in the coccygeal dimple we have had some experience of, and we are glad to find the author drawing attention to the condition, as it is one which does not seem to be generally understood.

We do not feel that we need enter into further detail. The illustrations are excellent, and the general get-up of the volume reflects great credit on both the publisher and the printer. We would only mention one persistently-recurring flaw, and that is the word "diverticuli." We can heartily recommend Dr. Tuttle's work to our readers, as we feel sure that they will find in it not only pleasant reading, but sound matter.

The Imperfectly Descended Testis: Its Anatomy, Physiology, and Pathology. By W. M'ADAM ECCLES. London: Baillière, Tindall & Cox. 1903.

THIS monograph embodies the chief facts put forward in the author's Jacksonian Prize Essay, and is published by permission of the Council of the Royal College of Surgeons of England.

The author deals exhaustively with the subject, both as

regards facts and speculations. These latter show us that we have not yet got to the end of the question of the causation of descent, complete or incomplete. The illustrations are numerous and mostly original; the sources of those borrowed from others are duly acknowledged. The question of the liability of the imperfectly descended testis to become the seat of malignant tumours is taken up at length, and the author's conclusions are that such an occurrence is much rarer than some suppose. His opinion as to the result of operations for transposition is, of course, not very decided, obviously from the scanty opportunities of learning late results. But one gathers that the outlook, so far as the future development of the transposed organ is concerned, is not very hopeful.

It is a sad reflection on teaching, or practice, that, thirty years after the enunciations of Lister, a surgeon has to lay down injunctions as to the necessity for operating with strict antiseptic precautions.

The subject of the book is gone into in a very systematic manner, too much so to make interesting reading, and the author's style leaves much to be desired. The heavy, glazed paper, does not make for comfortable reading in gaslight.

The work, however, is a very thorough exposition to date of the subject treated of, and it will take its place as a book of reference. It will repay perusal, and should be carefully studied by general practitioners, on whom depends so often the early recognition of abnormalities of the genital organs.

Tumours, Innocent and Malignant: Their Clinical Characters and Appropriate Treatment. By J. BLAND-SUTTON, F.R.C.S. Third Edition. London: Cassell & Co., Limited. 1903.

Two years have elapsed since we reviewed in these pages the second edition of the above well-known work. We now have the third edition before us, and we can congratulate the author on his success in keeping the contents so well up to date.

Amongst the various new features are sections on latent fibroids, relations of fibroids to menopause, pseudo-cysts in connection with the Fallopian tube, and a chapter on ovarian fibroids. The author's views have undergone a conversion as regards the treatment of spina bifida, reference being made to Nicoll's work in excising the sac. Again, no mention is made

of dissecting out the tunica vaginalis in hydrocele, but Winckelmann's operation is referred to as the "simplest." Our expectations of meeting something new in the sections on carcinoma of the Fallopian tube and on clinical distinction between sarcoma and carcinoma of the kidney are not realised, there being nothing of vital importance in addition to what appeared in the last edition.

The chapter on hydatids is welcome, giving a comprehensive view of the subject, which will be a great help to readers.

In spite of additional matter, we have fewer pages, but the reduced type, which is responsible for this, is so clear as not to strain the eyes. We congratulate the author on his work, and we are sure that this edition deserves and will meet with a continuance of the hearty reception accorded to its predecessors.

The Medical Examination for Life Assurance: With Remarks on the Selection of an Office. By F. DE HAVILLAND HALL, M.D., F.R.C.P. Third Edition. Greatly Enlarged. Bristol: John Wright & Co. 1903.

WE can heartily recommend this book to all who are interested in life assurance. It contains much valuable information, which is well arranged and presented in a very interesting style. Those to whom it is new may look for genuine pleasure in a perusal of this volume.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By JOHN G. GRAY, M.D., F.F.P.S.G.

Acute Leukæmia.—Several unusual features are met with in a case of this disease reported by Dr. Januszkiewicz in *Virch. Arch.*, 173, 2.

At the beginning of the illness, severe pain was present in the throat, gums, and upper lip, and there was a strong fœtor from the mouth, while evidence of rapidly advancing gangrene was observed in the parts referred to. Kübler has recorded a case of this kind that pursued a very rapid course and ended fatally, and in which the impression at first formed was that the patient was suffering from septic diphtheria. The author thinks that acute leukæmia should be borne in mind when the conditions above mentioned are met with.

The usual hæmorrhages, increase of the lymphadenoid tissue, and fatty degeneration of the heart were present; also, the medulla of the sternum and ribs was converted into a "greenish, glistening mass, having the appearance of pus."

The bone marrow showed a preponderance of the colourless elements, while the red blood corpuscles and hæmatoblasts were fewer in number than normal.

In the spleen, the Malpighian corpuscles were diminished, and the pulp increased; here, also, uninuclear elements—suggesting young endothelial cells—preponderated over the erythrocytes, which were few in number.

The liver and other organs showed principally an abundance of uninuclear white corpuscles.

The hæmorrhagic diathesis was absent, and the increase in the amount of uric acid. There were no predisposing factors, such as trauma, hæmorrhage, or infectious disease.

The blood contained lymphocytes, myelocytes, transition forms with and without granules, multinuclear leucocytes, with neutrophile, basophile, and eosinophile granules; besides, small leucocytes, mast cells, eosinophile myelocytes, and large uninuclear leucocytes.

The large lymphocytes were much the more numerous. The high percentage of myelocytes, viz., 5.25 per cent, was striking. The gradual diminution in the number of myelocytes is explained by the marked increase of the lymphoid tissue in the bone marrow.

The similarity of the large lymphocytes to certain of the endothelial cells raises the question as to whether the latter do not play an important part in the formation of the lymphoid tissue and of large lymphocytes.—(Keczei, *Deutsche Medizinische Zeitung*, 9th November, 1903). Vide also abstract by Dr. Hunter in the *Glasgow Medical Journal*, January, 1904, of a paper entitled "Acute Lymphocytic Leukæmia, with Reference to its Myelogenous Origin," by Dr. A. O. J. Kelly (*Univ. of Penn. Med. Bulletin*, October, 1903).

Vascular Tumour of the Vertebral Column.—A case of unusual interest is reported in *Virch. Arch.*, 172, 2, by Dr. Muthmann, of Basle.

The patient was a man, 61 years of age. He had pronounced kyphosis of the middle and lower portion of the spinal column. There was pain on percussion, and symptoms of compression of the cord were present.

On *post-mortem* examination, an angioma was found at the level of the sixth dorsal vertebra. The space between the inner and outer layers of the dura mater was filled with a brownish fluid mass. It was also found in a few spaces behind the pleura. The brownish substance came from the compressed body of the vertebra referred to.

On microscopic examination, the mass was seen to be composed of blood spaces closely packed, which were united by connective tissue with the outer surface of the inner layer of the dura mater, between whose networks of adipose tissue it lay. It was therefore a cavernous angioma of the body of a vertebra, with extension into the vertebral canal on the one hand, and into the subpleural fatty tissue on the other.

Another case of angioma of a vertebra extending between the bone and the dura mater has been recorded by Gerhardt.—(Keczei, *Deutsche Medizinische Zeitung*, 26th November, 1903).

Acromegaly.—Filipello, in the *Gaz. hebdom.*, describes a case of the above disease, the special features of which are:—

1. Absence of headache and disturbances of vision.
2. Normal condition of the pituitary body.
3. The persistence of the thymus gland.
4. Changes in the thyroid gland.
5. Oliguria.
6. Delirium.

The absence of headache and disturbances of vision are to be explained, says the author, by the fact that the thyroid gland was not enlarged, as was borne out by the autopsy.

According to Gauthier, as also to Klebs, hypertrophy of the thyroid gland is only a symptom like the hypertrophy of the extremities.—(M. Loeb, *Deutsche Medizinisch-Zeitung*, 6th August, 1903).

SURGERY.

By ARCH. YOUNG, M.B., C.M., B.Sc.

Congenital Torticollis: Autopsy, with Histological Examination of the Nervous System.—In reading the literature of congenital torticollis one cannot help contrasting the variety of the hypotheses as to its pathogenesis with the slenderness of the evidence on which they are founded. Some of these are based on a careful semeiological study (the presence of other malformations, constancy of cranio-facial hemiatrophy, general development), others on a minute etiological inquiry (difficult labour, heredity, &c.), and there are amongst them, certainly, arguments of great value. Arguments founded on an anatomico-pathological basis are rarely brought forward, and when they are used, generally deal with the state of the sternomastoid, deformity of cervical vertebræ, &c. Excepting an observation by Broca of a slight atrophy of one hemisphere, Gallavardin and Savy have not been able to find any account of the state of the central and peripheral nervous system with careful histological examination. Reference is made to Golding-Bird's view that one should seek the cause of torticollis in some central lesion and not in the peripheral nerves. The authors had the opportunity of making an autopsy on a man, aged 60, the subject of œsophageal cancer. He had marked congenital torticollis on right side, with cranio-facial hemiatrophy. He alone of his family presented this condition, which he attributed to his mother having been delivered by forceps. Briefly, the appearances in the affected *sterno-mastoid muscle* were as follows:—Tendinous transformation with shortening of the sternal head (8 c.m. in length, instead of 18 c.m.); simple muscular atrophy of the clavicular head; no cicatricial appearance; no trace of old hæmatoma or inflammatory adhesions around the muscle.

No lesion was found in the *peripheral nervous system* (spinal nerves, cervical sympathetic trunk and superior and inferior cervical ganglia). The *cerebral hemispheres* were almost equal in size and weight. The *medulla* and the *cervical cord* appeared to the naked eye absolutely healthy, but one observed evident atrophy of the cervical roots (*filets radiculaires*) on the right side. Histological examination of the upper cervical region of the cord showed very marked atrophy of the anterior cornu on the right side; the cornu was not only smaller in area, but was more pedunculated than that on the left. The large radicular cells were very few in number, numbering only about half of those on sound side. The same was true of the smaller cells at the base of the cornu and in the intermedio-lateral tract. The cause and nature of this atrophy of the cornu could not be ascertained.

The authors discuss whether the condition may be analogous to the poliomyelitis anterior acuta of infancy, or whether the nerve-changes may not be secondary to the muscle lesion. If there are no evidences of myelitis, neither are there any of cells secondarily atrophic. They conclude (1) that there is no evidence in favour of the local muscular origin of the torticollis, or (2) of its being neuritic; (3) a spinal lesion exists "collaterally" with the muscular one; and (4) the exact significance of this lesion remains to be determined, i.e., whether the spinal condition be primary or secondary to muscle lesion.—(*Lyon Medical*, 22nd November, 1903).—G. H. E.

The Surgical Treatment of Traumatic Hæmorrhage from the Spleen.—N. Senn, M.D., Chicago, in a paper delivered at the Surgical Section of the International Medical Congress (Madrid), 1903, and published in the *Journal of the American Medical Association* (21st November, 1903), summarises the possible methods of procedure as follows :—

1. *Splenectomy.*—This is imperative if the organ is enlarged and softened by disease, as after acute fevers or in chronic malaria. Textural changes which have taken place under such conditions lead to exceedingly obstinate bleeding in the event of wounds of the organ, and all procedures short of splenectomy are usually futile. Splenectomy is also imperative if the hilus of the spleen is wounded, or if the wound involves the main trunk of the splenic artery.

2. *Partial splenectomy.*—This may be employed in cases where the lower part of the spleen has been extensively torn, or if a transverse wound has divided two thirds of the organ. The injured or partially detached portion should be amputated by crushing forceps, and omentum should then be used to cover the crushed tissue, being sutured in place with catgut. This is effective not only in accomplishing hæmostasis, but also in preventing harmful visceral adhesions.

3. *Splenorrhaphy.*—This has a considerable application, and in appropriate cases is effective. If decided on, digital compression should be employed in preventing loss of blood until the suturing has been completed. The mattress suture is found most suitable in arresting hæmorrhage. The cut or torn edges may subsequently be closely approximated with a few interrupted catgut stitches.

4. *Aseptic tamponade.*—Notwithstanding the absence of any adequate resistance to pressure, this method has given satisfactory results in not a few cases. It may be employed if the bleeding is venous or parenchymatous; if the bleeding is mainly, or in considerable part arterial, it should never be relied on. The Mikulicz tampon should be employed. The plug may be removed with ease, and there is no risk of any portion being left in the wound. It serves also as a drain, and can be diminished when desired.

5. *Canterisation.*—This is seldom admissible. It is unreliable, and may damage important adjacent structures. The resulting eschar interferes seriously with ideal healing of the visceral wound.

6. *Marginal crushing of the wound and suturing.*—This method Senn believes to have by far the widest application, and to be the most reliable procedure in arresting traumatic hæmorrhage from the spleen in all cases where it is at all possible to save the spleen. Crushing forceps applied to the torn margins at once arrest the bleeding, and as the vessels in the crushed tissues are speedily obliterated by thrombosis, recurrence of the bleeding is obviated. The crushed wound-margins are at once united and sutured with catgut.—A. Y.

Rupture of the Tendon of the Extensor Longus Pollicis: Tendon Transplantation. C. L. Scudder, M.D., and W. E. Paul, M.D. (*The Boston Medical and Surgical Journal*, 10th December, 1903).—This paper is noticed here specially for three reasons :—

1. The comparative rarity of rupture (uncomplicated) of a long tendon of the hand.

2. The difficulty presented in this case in interpreting the anatomical meaning of the functional loss.

3. The light thrown by the case on the question of the comparative importance of the long and short extensors of the thumb.

The patient was an elderly female who fell in such a way as to strike the back of the left hand on the edge of a stone step. Save for some bruised skin and slight tenderness over the proximal end of the first metacarpal bone, little definite discomfort was experienced. Three weeks later, when kneeling on the floor, patient rested on her left elbow, and on rising found that the left thumb "could not be used as before, and the thumb was flexed in the palm."

Examined the following day, the thumb movements were impaired as follows:—"Extension of the proximal phalanx was practically absent, so that the thumb was invariably closed upon by the flexed fingers in grasping movements. Feeble extension of the distal phalanx was readily and repeatedly performed. All movements of the metacarpal of the thumb were executed, though extension and abduction were of less range than on the sound side."

In consideration of these facts, and in the absence of tenderness near the insertions of the tendons over the phalanges, the lesion was diagnosed as probably a rupture of the extensor brevis pollicis tendon (ext. primi internodii) near its insertion.

Operation disclosed, six weeks after the loss of function, the fact that it was the tendon of the extensor longus pollicis (ext. secundi internodii) which had ruptured, not the short extensor as had been supposed. The point of rupture was near the lowest muscular insertion, opposite the proximal end of the metacarpal of the thumb. As a separation of 6 to 7 cm. prevented approximation of the divided ends, the expedient of fixing the peripheral end of the extensor longus pollicis tendon to that of the extensor carpi radialis longior was selected.

Convalescence from the operation was uneventful.

Eight months after operation the function of the thumb was as follows:—"Extension of the thumb sufficient to permit all movements of the fingers alone, or grasping movements requiring the opposed thumb—the range of the extension of the terminal phalanx about one-third of normal, and in the proximal phalanx the last third of extreme extension impossible." The patient, however, felt sure there was a steady gain in facility of thumb motions. Scudder and Paul suggest that the limit of improvement may not yet have been reached, perhaps because the cortical control of the thumb is only gradually rearranging itself to meet the new conditions.

Although the results of the operation are interesting in considerable measure on account of the restoration of the functions of the thumb, which, for practical uses, is now quite satisfactory, the chief interest in the case is centred in the light it throws on the anatomical relations and relative functional importance of the individual thumb muscles.

The writers (Scudder and Paul) enlarge on the erroneous nature of the description of the actions of the extensor muscles of the thumb given by most authorities. In their patient "the first phalanx could not be extended; if the first phalanx, moderately flexed and abducted, was grasped by the observer, the terminal phalanx could be flexed and feebly extended at will. The metacarpal could be extended, abducted, and flexed with nearly normal range. For this patient, therefore, the extensor longus pollicis subserved almost wholly the function of extension of the first phalanx on the metacarpal bone; and the extensor control of the second phalanx was reinforced by other muscles, probably the abductor and short flexor of the thumb."

The preservation of the extensor brevis pollicis, with loss of extension of first phalanx, is explained by the writers by assuming that, in their patient, the brevis functioned chiefly as an abductor of the thumb.

This, of course, is already in a measure recognised as part of the function of the extensor brevis pollicis (ext. primi internodii), though it is also generally believed to extend the first phalanx. Gowers' view on this point is quoted by Scudder and Paul.

The latter conclude that their case supports the view "that the extensor longus pollicis muscle is the more important of the extensors of the thumb, and, perhaps, second to no single muscle of the whole hand in functional value; moreover, the extensor brevis pollicis, acting alone, has very feeble extensor control over the first phalanx."—A. Y.

A Simple Method of Treatment of Nævus.—Carl Beck, M.D., describes, in the *Journal of the American Medical Association* (26th December, 1903), a simple method of treating a nævus which, from its size, does not admit of excision. This method was followed in the case of a child, aged

3 months, in whom there was a very extensive angioma of the face. It was composed of several different growths, with intervening small islands of normal epidermis between them. It was so large as to have been declared by several surgeons quite inoperable. Beck's method consisted in the "general principle of transforming the masses of vessels gradually into connective tissue." This was done in several sittings by subcutaneous suture. "A thread of catgut was passed in zig-zag manner first below the skin, then under the base of the tumour, then underneath the skin, under the tumour, &c., until the tumour mass was included in this continuous suture. The suture was then tightened and closed at the point of entrance of the needle. The circulation was thus shut off within the tumour, but no gangrene followed, inasmuch as some blood could yet reach the parts not included in the suture. After a week the mass seemed smaller. The normal epidermis, however, outside of it, which had been stretched, became soft and elastic again. This treatment was repeated, until the tumour had been diminished to the smallest possible nodule of connective tissue, and the healthy skin enlarged to the utmost. Then the hard connective tissue masses were excised, and the borders united in fine linear union." The result was very satisfactory. Even the "cosmetic result" was quite good. This is shown by photographs.—A. Y.

First Dressing on the Battlefield.—In a paper presented to the Military Section of the International Medical Congress (Madrid), 1903, N. Senn describes the "first aid package," devised and recommended by him, as the result of his experience while accompanying the American army during the late Spanish-American war. The complete paper is published in the *Journal of the Association of Military Surgeons of the United States*, 1903.

The package, which, he says, was made as light and as small in size as possible, "is simple in its make-up and application," yet it contains "everything essential to protect the wound against subsequent infection." Senn employs "boro-salicylic powder (4:1) as the antiseptic, a sterile gauze bandage (4 inches wide and 2 yards long), a compress of sterile absorbent compressed cotton (4 inches by 4 inches), 2 safety-pins, and a double envelope, the inner of fine paraffin paper, the outer of waterproof linen, upon one side of which the directions for the application are printed, a second similar dressing attached to the first by two loose stitches of sterile cotton thread, and two strips of adhesive plaster for each dressing (1 inch wide and 8 inches long). Half a drachm of boro-salicylic powder is incorporated in the centre of the cotton compress, and its location marked on the inner side of the gauze cover with tincture of iodine, the mark corresponding in size with the average opening of an ordinary bullet wound. This brown spot indicates the location of the antiseptic powder, and how and where the compress should be applied. The first cotton compress is rolled once or twice in the beginning of the gauze bandage, and unfolding prevented by two marginal stitches of aseptic thread. The adhesive plaster strips are fastened to the outer side of the compress, with the free ends covered by the attached cloth reflected over the attached part. The second compress is made up in a similar manner, and attached to the first one by two aseptic loose cotton thread stitches. The two compresses are laid against each other, with the adhesive strips on opposite sides, and wrapped up neatly in the balance of the bandage, to the distal end of which two safety-pins are fastened.

"If the package is used in dressing a single wound, both compresses are applied over it, with the brown spots in the direction of the wound, and the adhesive strips in the opposite direction, the roller bandage applied over them and fastened with the safety-pins.

"If two wounds are to be dressed, the second compress is separated from the first by tearing the threads connecting them and applied over the second wound, both of them fastened with the plaster strips and included in the same roller; or, if the wounds are too far apart, the bandage is cut at

the desired point and each part applied separately, in which case the fastening must be done with one safety-pin. In special cases the surplus part of the bandage can be utilised for a sling, or in the application of extemporised fixation dressings. No unnecessary handling of the material is required in the application of this dressing, and the procedure is so simple that the average soldier will comprehend it almost instinctively, and can make intelligent use of it whenever emergency calls for it."—A. Y.

A New Method of Closing the Abdomen after Laparotomy.

—F. A. Higgins, M.D., in the *Boston Medical and Surgical Journal* (10th December, 1903) describes a modification of the usual technique.

Premising that "the layer suture is generally regarded as the nearest approach which we can attain to the natural conditions existing before operation," and that "this with some combination of the mass (or through and through) suture, probably offers the strongest barrier possible to hernia and to infection through accumulation of fluid within the walls," he points out that "the tier suture is chiefly objected to because of the danger of the so-called dead-spaces;" and that the mass or retention sutures passed through the whole of the layers, including the skin, not infrequently irritate and cut through the latter, giving rise to "additional scars on the abdomen, which, later, are often seen as welts from one-quarter to one-half inch in length, running at right angles to the direction of the wound." On the other hand, "the early removal of these through and through sutures is apt to end in some separation of the edges of the wound entailing delayed union and a wider scar."

With a view, then, to the minimising of the usual dead-space between the layers, and the prevention of the traction scarring of the skin, Higgins has introduced the use of a narrow metal plate with straight parallel edges. This plate "is a strip of thin nickel-plated copper, about one-thirtieth of an inch thick. It is stiff enough not to be bent by the sutures, but it is easily bent by the fingers in case it needs to be adjusted to any inequalities in the surface of the abdomen." The earliest forms of plate used were perforated or serrated, but in practice it was found inexpedient to employ either perforations or serrations, chiefly on account of the extra time taken up in putting in the sutures with such care as to bring them directly opposite the perforations or serrations. The plain strip of metal above described is found quite satisfactory, the sutures hold equally well, and the plate does not slip if properly fixed.

The details of procedure are, shortly, as follows:—

"The mass sutures of silkworm-gut are introduced by double-threaded, large curved needles. One suture is placed at either end of the wound, and one or more between, depending upon the length of the wound, fewer being needed than without the metal guard. The ends of these mass sutures are clamped and held on either side by heavy clamps, which, by their weight, hold the sutures tight and prevent any danger of the intestine or omentum slipping beneath them.

"The peritoneum is then closed by a running suture of fine unchromicised catgut, the fascia by fine twenty-day chromicised gut, and the skin by a subcuticular suture of fine silkworm-gut or horsehair. The mass sutures are finally tied over the metal guard, which is separated from the abdominal wall by a pad of folded sterile gauze. A small pad of sterile gauze is inserted under either end of the guard, and is folded over the ends, completely enclosing the wound in an effective and immovable antiseptic dressing. The outer dressing need only be a comparatively small one."

"Usually on the fifth day after operation the first dressing is done, and the mass sutures, having performed their function, are cut. They are not removed till the day following. Having merely perforated the skin for a short time, the mass sutures leave no permanent scar."

"The through and through sutures should not be tied under more tension than one would use without the metal guard. In this way the circulation is

not interfered with, the vitality of the tissues is not lowered, and there is no cutting through of the sutures, at least on the surface. The gauze beneath the metal guard is of advantage in that it relieves the skin from direct pressure of the metal, and that it absorbs the slight amount of blood from the skin and whatever may be expressed by the counter-pressure."

"In addition, the metal guard holds the dressing absolutely in place without adhesive straps."

For this method it is claimed that:—

1. It in no way interferes with the perfect and aseptic healing of the wound.

2. It effectually controls all oozing of blood and serum into the wound, so that it is rarely necessary to ligate any vessels; the accumulation of all collections of blood within the layers of the abdominal wall is thereby prevented.

3. The pressure of the metal guard promotes adhesion between the layers in the abdominal wall. In support of this it is stated that "a distinct induration may be felt running along on either side parallel with the edges of the wound," and Higgins believes that this "tends to the formation of a firmer and stronger cicatrix than any other method yet proposed," as well as to the prevention of stretching apart of the edges of the skin, hence encouraging the formation of a linear scar.—A. Y.

NERVOUS DISEASES AND INSANITY.

By DR. R. S. STEWART.

Acute Anterior Poliomyelitis of the Adult. Van Gehuchten (*Archives de Neurologie*, October, 1903).—This is the case of a woman of 21 in whom complete paralysis supervened in a few days from the onset of illness, and death occurred two months afterwards. Examination of the cord demonstrated the existence of complete bilateral destruction of the anterior grey cornu from the superior cervical region to the second lumbar segment, a destruction most marked in the cervical and lumbar enlargements, and so intense as to cause a complete subsidence of the cornu and a folding of the enveloping white substance. In the destroyed parts no nerve cells or fibres could be found, but an abundance of dilated vessels with thickened walls and surrounded with a thick layer of small cells was met with. These vascular lesions appeared to affect the veins exclusively, were most accentuated in the grey substance, and diminished rapidly in the white substance, so that at the pia mater the vessels were normal. The opinion is expressed that the destruction of the grey substance is to be attributed to medullary hæmorrhages, and that the lesion is a primary one.

Lesions of the Fundus Oculi in General Paralysis. Raviart and Caudron (*Archives de Neurologie*, November, 1903).—Of forty-four cases examined, papillary lesions were found in 73 per cent. It did not appear possible to connect these lesions with any determinate etiological factor, for though 80 per cent of the patients were alcoholics the remainder were not so, and yet none the less presented lesions; and, on the other hand, though 20 per cent were syphilitic, only four of these presented syphilis unassociated with other causal conditions.

Cerebral Tumour with Abolition of the Tendinous Reflexes. Raymond (*Archives de Neurologie*, January, 1904).—In addition to the classical symptoms of cerebral tumour, the case here described presented one other peculiarity—abolition of all the tendon reflexes in both upper and lower limbs; and Professor Raymond expresses the opinion that this

phenomenon is elucidated by the researches of Philippe and Lejonne. According to these two observers the medullary lesions occurring in cases of cerebral tumour are distinctly individualised, not only by their topography and their principal histological characters, but, above all, by their very special pathogenesis. These lesions predominate very distinctly over the posterior radicular system, in which, however, they are more or less diffuse, obeying no systematisation, extending to all the radicular zones with the exception of the endogenous tracts. The intensity of the lesion as it affects the posterior root is found to increase in proportion to its nearness to the ganglion, so that it attains its maximum in the immediately preganglionic region. The spinal ganglion becomes enormously increased in volume and permeated with lacunæ filled with clear fluid, absolutely similar in appearance to normal cerebrospinal fluid, a veritable dropy of the ganglion. It is, at bottom, a case of accidents of compression, which may be ranged alongside the accidents of cerebral pressure so common in the course of tumours of the brain.

Hydrocephalus Internus in the Adult. Berkley (*American Journal of Insanity*, October, 1903).—Attention is drawn to the fact that this condition may very closely simulate tumour of the brain. The similarity between the symptomatology of internal hydrocephalus of the adult type in its ordinary form and that of cerebral tumours is of considerable importance, both from a diagnostic and surgical standpoint, and should be well borne in mind before an operation is decided upon when there are no definite focal symptoms.

The Pathology of Acute Delirium. Tomlinson (*American Journal of Insanity*).—The disintegrative changes in the cortex—first blood stasis, then oedema from lymph stasis, and finally destruction of the nerve cell—resulting from experimentally produced conditions, are found to be exactly the same as those which take place in the human brain as the result of a similar exhaustion from disease. How far this disintegration may be the direct result of overwork, and how much it may be contributed to by intoxication can only be inferred; but it is probable that one supplements the other. The histological changes in the cortex seem to be an indication of the degree of morbid cerebral activity to which they are consecutive. In an unstable brain this morbid activity may result from the intoxication of uræmia or that accompanying bacterial infection; and these changes will vary in degree, not on account of the differences in these different kinds of intoxication, but always in direct proportion to the degree of instability and the amount of mental and motor activity. The greater the degree of instability of the nervous system the easier the delirium is set up, and the more violent it is; and the disintegration will be the result of the overwork and excessive activity of the cell (the cytobiosis), and not the cause of it.

Katatonía. Bruce (*Journal of Mental Science*, October, 1903).—The conclusions of this observer are—

1. Katatonía is an acute toxic disease with a definite onset and course, in which the symptoms vary according to the resistive power of the patient, but in which the following diagnostic symptoms are never absent:—A prodromal period of gradual onset, which leads into the period of acute onset, with aural hallucinations, mental confusion, paroxysms of excitement, impulsive actions, katatonic spasm of the muscles, a hyperleucocytosis which at the termination of the acute stage indicates a virulent toxæmia. In the second stage, a condition of stupor with muscular resistiveness to passive movement.

2. Even at the onset of the disease there is in about 70 per cent of the cases an agglutinin in the blood-serum which appears to be a specific agglutinin to a short streptococcus, which was isolated from the blood of an acute case of katatonía.

3. By infecting rabbits through the alimentary tract or blood-stream with this streptococcus, a condition of malaise with irregular temperature, increased skin reflexes, and mental hebetude is induced. This disease tends to terminate naturally in healthy rabbits in about six weeks, and a condition of immunity is established to this organism.

4. Treatment by an anti-serum obtained from a goat has given no beneficial results.

5. Active immunisation of patients in the stuporose state produced no curative effect.

6. Active immunisation in the acute onset of the disease—tried so far in one case only—produced undoubted benefit, but how this beneficial effect is brought about cannot be explained.

Books, Pamphlets, &c., Received.

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A Manual of Operative Surgery, by Sir Frederick Treves, Bart., K.C.V.O., C.B., F.R.C.S., &c. Revised by the Author and Jonathan Hutchinson, Jun., F.R.C.S., &c. London: Cassell & Co. 1903.

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A Pocket Dictionary of Hygiene, by C. T. Kingzett, F.I.C., and D. Homfray, B.Sc. Second Edition. London: Baillière, Tindall & Cox. 1904.

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- Mammalian Anatomy,** with special reference to The Cat, by Alvin Davidson, Ph.D. With over One Hundred Illustrations, made by W. H. Reese, A.M., from the Author's Dissections. London: Rebman, Limited. 1903. (7s. net.)
- Text-Book of Diseases of the Eye,** for Students and Practitioners of Medicine, by Howard F. Hansell, A.M., M.D., and William M. Sweet, M.D. With 256 Illustrations, including Coloured Plates. London: Rebman, Limited. 1903. (17s. net.)
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**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FIVE WEEKS ENDING 23RD JANUARY, 1904.**

	WEEK ENDING				
	Dec. 26.	Jan. 2.	Jan. 9.	Jan. 16.	Jan. 23.
Mean temperature, . . .	38·1°	33·6°	40·4°	39·3°	43·8°
Mean range of temperature between day and night, . .	10·9°	8·9°	8·6°	8·6°	8·8°
Number of days on which rain fell, ...	2	0	4	5	3
Amount of rainfall, . . ins.	0·59	0·00	1·4	1·62	0·15
Deaths registered, ...	350	372	379	309	316
Death-rates, ...	23·1	24·6	24·8	20·2	20·7
Zymotic death-rates, . . .	3·4	3·2	2·1	2·0	1·8
Pulmonary death-rates, . .	7·5	8·3	7·8	8·0	7·7
DEATHS—					
Under 1 year, ...	71	93	79	66	64
60 years and upwards, . .	66	73	89	65	67
DEATHS FROM—					
Small-pox, ...	4	5	3	4	2
Measles, ...	23	23	12	19	13
Scarlet fever, ...	2	1	1	...	...
Diphtheria, ...	2	...	2	...	3
Whooping-cough, ...	8	6	3	2	2
Fever, ...	2	2	1	2	3
Diarrhoea, ...	10	10	10	4	5
Croup and laryngitis, . .	...	1	1	1	1
Bronchitis, pneumonia, and pleurisy, ...	98	102	103	100	85
CASES REPORTED—					
Small-pox, ...	43	49	44	65	71
Diphtheria and membranous croup, ...	16	11	10	17	14
Erysipelas, ...	25	18	22	23	18
Scarlet fever, ...	28	38	20	35	33
Typhus fever, ...	...	...	...	...	1
Enteric fever, ...	8	8	14	10	4
Continued fever, ...	...	...	...	...	...
Puerperal fever, ...	1	2	1	3	1
Measles,*	426	223	288	512	419

* Measles not notifiable.

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ORIGINAL ARTICLES.

ACCOUCHEMENT FORCÉ BY MODERN METHODS, WITH
SPECIAL REFERENCE TO THE USE OF BOSSI'S AND
FROMMER'S DILATORS, AND DÜHRSEN'S INCISIONS
OF THE CERVIX.¹

By J. M. MUNRO KERR, M.B.,
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ACCORDING to von Siebold, the great obstetric historian, Guillemeau introduced the term "accouchement forcé." Guillemeau, the most distinguished of Ambrose Paré's pupils, and the translator of the works of the latter into Latin, wrote a treatise of three volumes on surgery, which was published in 1594. What interests us specially to-night in that work is the fact that, in convulsions and hæmorrhage, he recommended "accouchement forcé."

It is curious how the pendulum swings backwards and forwards in practical obstetrics. Here are we to-night discussing an operation introduced three hundred years ago, an operation which had its day, was tried and universally condemned, but which, having been revived, is probably the most burning question in midwifery at the present moment.

¹ Read on introducing a discussion on the subject at a meeting of the Glasgow Obstetrical and Gynæcological Society, 25th November, 1903.

Now, what are the reasons for this revival of "accouchement forcé"? They are two in number—the employment of greater surgical cleanliness in the treatment of patients, and improved operative technique. To reiterate all that asepsis and anti-sepsis have done for operative midwifery is quite unnecessary. I would only say here that they have paved the way for new and more active operative interference. Opportunities to interfere safely being provided, there has naturally followed a gradual improvement in the methods of operating. Guillemeau could only hasten labour by turning the child, bringing down both feet, and exerting traction on its limbs. Later, manual dilatation was more and more perfected, although it was doubtless practised from the earliest times. Metal dilators were introduced in gynecology and in midwifery to start dilatation, and tents were employed for the same purpose.

The first great improvement in technique was the introduction of the indiarubber dilators, or bags, by Barnes, Champetier de Ribes, Müller, and others; the next, in 1890, when Bossi described the dilator, the prototype of which was doubtless the pronged dilator used for stretching the rectum and cervix in gynecological work. At first, the instrument was not taken up very enthusiastically, but ample amends have been made the inventor in that respect, for in the last few years so much has it been discussed that one can hardly open an obstetric journal without seeing some reference to it. Bossi's dilator has been considerably modified from the first pattern, and recently further improvements have been made, and the dilator of Frommer, which is before you on the table, possesses distinct advantages over the older instrument. But, not satisfied with such methods for rapid delivery, incisions—not little and superficial, but deep cuts right up to the vaginal vault—have been recommended, and Dührssen has even gone the length of advocating incisions into the body of the uterus, an operation to which he has given the name of "vaginal Cæsarean section."

Before, however, going further, the exact meaning of "accouchement forcé" must be agreed upon, for the term has come to be loosely applied by some to any rapid extraction of the child. To my mind, and I think you will all agree, the two essential features of "accouchement forcé" are rapid and forcible enlargement of the cervical canal, and subsequent extraction of the child. Now, as regards the enlarging of the cervical canal, there are only two ways of doing it—one is by dilating or stretching the canal, and the other is by incising it.

METHODS OF DILATING THE CERVIX.

Dilatation, as a step in the operation of “*accouchement forcé*,” may be carried out with the hands, rubber bags, or metal dilators. We will take each of these separately, for, although we are concerned chiefly with the metal dilators, we must consider the other instruments at our disposal, in order to compare the advantages and disadvantages of each.

Manual dilatation.—Taking manual dilatation, its obvious advantage is that the operator requires no instrument, all the stretching being done with the fingers. The disadvantages are that the operation takes time, is sometimes impossible if the cervix is undilated and rigid, and is often very fatiguing.

Before you can begin manual dilatation proper, you must get at least two fingers through the canal. Sometimes the preliminary dilatation may be carried out with one finger pushed farther and farther in, but often even that is impossible, and the graduated dilators of Hegar or Cameron must be had recourse to. Having got the two fingers through the os, the rest of the operation may be carried out by getting more and more of the hand through, or by employing the fingers of the two hands (Bonnaire’s method). Could we always dilate the cervix quickly enough by this method, it would without doubt be the best, for there is less chance of tearing if you move the dilating fingers about, stretching sometimes antero-posteriorly and sometimes laterally. Besides, you can tell better what you are doing. There is another point, also, and one which I cannot remember having seen mentioned, and it is that, with the manipulations, the cervix often becomes softer.

Let me, with extreme brevity, give you a few illustrative cases.

1. Mrs. L., vi-para, six months pregnant, was taken into the Maternity Hospital for eclampsia in August, 1900. Os with difficulty admitted finger, and was extremely rigid; manual dilatation; version and extraction—duration of operation, an hour and a half.

2. II-para, seen in consultation with Dr. McMillan in June, 1902. “*Accouchement forcé*” on account of dyspnoea; foetal heart becoming slower; manual dilatation and extraction with forceps took fifty minutes.

3. II-para, six months pregnant, seen with Dr. Loudon, of Hamilton, in September, 1902; eclampsia. Os admitted finger; dilatation, with bags and fingers, followed by version; os very rigid; sixty minutes, at least, until child extracted.

4. -para, about seven and a half months pregnant, seen in consultation with Dr. Parker, Gartloch. Acute mania; dilatation with fingers, followed by version and extraction; operation took thirty-five to forty minutes.

These have purposely been picked out as amongst the most difficult cases of manual dilatation. In my experience, the shortest time taken to dilate manually and deliver a woman not in labour has been fifteen minutes. It was a case of contracted pelvis in which I was going to induce labour, but, after douching, finding the cervix so soft, I dilated and extracted the child. The longest time was about an hour and a half (Case 1).

Taking an average of my cases, I would say that to dilate and deliver a multipara not in labour, and with the cervix not obliterated, forty minutes are required at least; and, to do the same in a primipara, about sixty to eighty minutes. I do not include, of course, cases of abortion when the os is slightly dilated and will admit only one finger, but I am sure that most of you will agree with me that, in such cases, a very considerable time indeed is often necessary to dilate the cervix manually, and, indeed, that is sometimes impossible.

Dilatation with hydrostatic dilators.—Dilatation with rubber bags should hardly come into consideration in "accouchement forcé." One cannot get sufficient dilatation with such bags alone, a more complete stretching with the hands being necessary after their removal. Other objections are that rubber bags can only be used after the cervix has been sufficiently dilated to allow of their being introduced, and dilatation with them takes some time. Undoubtedly, the bag of Champetier de Ribes is the best, but one must always test it carefully, as it is liable to burst if at all old. Only the other day one burst in my hands when I tested it prior to employing one for the induction of labour. The advantages of hydrostatic dilators of the type of Champetier de Ribes over those of Barnes are that a more extensive dilatation can be brought about by them. Barnes' bags, if the cervix is at all rigid, balloon up inside the uterus. This ballooning is doubtless due to the rubber being so much softened by the soaking in the antiseptic solution, or to the boiling, but that is unavoidable, for there are no other means of sterilising such bags. I have seen it sometimes suggested that more than one bag should be used, but that is really not practicable.

Dilatation by metal dilators (Bossi, Frommer).—But of all methods of dilating the cervix, none is so rapid as that carried out by metal dilators, several patterns of which are in use, and

are before you on the table to-night. I have said already that the prototype of the Bossi dilator was doubtless the pronged dilators which have been in use in rectal and gynaecological surgery, and, indeed, which have even been employed in dilating the cervix preparatory to removing the ovum in cases of abortion.

Bossi's first instrument consisted of three prongs, but later a fourth was added. Quite recently, Frommer introduced another instrument, which consists of eight prongs, and which is a distinct improvement, for it allows of the pressure being more equally distributed round the margin of the os. It has this disadvantage, however, that the prongs are sharper, and that the operator cannot so readily as with Bossi's dilator get the fingers between the prongs to see how the cervix is stretching.

The great advantage of the instruments of Bossi and Frommer is that with them the os can be dilated more quickly and with much less fatigue than with the hands. Roughly speaking, one takes about twenty-five minutes to dilate the cervix from the time it will admit the instrument. The operation is easiest in multipara where the cervix is already obliterated. Here are some recent examples:—

IV-para, eclampsia at term; seen a few months ago in consultation with Dr. Watson, Langside. She had had about forty fits before I saw her; os admitted dilator; dilatation and extraction of child with forceps took twenty-five minutes; no tearing of cervix; patient died following day.

A much more difficult case was the following:—

Primipara; eclampsia; seen in July, 1903, with Dr. Jones, Govan. Patient had had seven fits, and os just admitted one finger, with cervix not quite obliterated. I dilated without caps, then completed dilation with caps over prongs. Dilatation up to Figure 9 on index took twenty-five minutes, delivery completed with forceps five minutes later. Slight laceration of cervix, but none of perineum. This patient's recovery was excellent.

The last case of forcible dilatation which I shall give was carried out with Frommer's eight-pronged dilator. It illustrates the danger of the instrument in cases where the cervix is not taken up, and when pregnancy is not far advanced.

A primipara, five months pregnant, was admitted to the Maternity Hospital under my care on account of hæmorrhage. It was a case of threatened abortion. I tried to arrest the abortion with rest and sedatives, but profuse bleeding occurred two days later, and she became much collapsed and showed

signs of sepsis—the pulse and temperature becoming quite febrile. I determined to empty the uterus. The cervix admitted a No. 13 Hegar, after which I got the Frommer dilator pushed well in, steadying the cervix with a vulsellum forceps while doing so. I went on dilating a little way, and felt that suddenly the resistance became less. I withdrew the instrument, and found that I had torn the cervix at the left side, not on the vaginal surface, but on the cervical. My explanation to the students at the time was that the dilator had not gone quite through the os internum, and that was the reason why Gardner,¹ a recent house surgeon at the Maternity Hospital—entirely with my approval—said in his paper, “In cases where the cervix is not taken up, there is a greater risk of doing damage owing, as already detailed, to the prongs not passing completely through the internal os. From reported cases, I have not seen this danger referred to; it is more liable to occur when the cervix is dragged upon and consequently lengthened by the vulsellum forceps being used to steady the organ.” I am still of opinion that that is possible with Frommer’s instrument, but, thinking over the case, I do not believe that it really occurred in this case, for the internal os was considerably dilated when I removed the instrument. But to return to the case. I went on with the dilatation very cautiously, and the cervix split completely through on both sides. I then cleared out the uterus, douched and stitched the tears carefully. This patient died in three days, of sepsis. She was, of course, as I have explained, septic before the operation.

Taking these three cases, there are two deaths, and that may seem at first rather alarming; but let it be clearly understood that the dilators cannot in the slightest degree be blamed for such unfortunate terminations. In the first case the woman had had forty fits, and in the other the woman was septic before operative treatment was commenced. One must remember that, as a rule, Bossi’s or Frommer’s dilator is had recourse to only in very bad cases, in which a high mortality will be the rule, no matter what treatment is adopted.

We must base our criticism on the extent of injury done to the cervix. Looking at the matter from that point of view, I find that in six cases in which the os was the size of a shilling or less, I had one bad case of laceration and two of slight laceration. In fourteen cases recently reported by

¹ “Fourteen Cases of Forceful Dilatation of the Os by means of the Bossi Dilator,” *Journal of Obstetrics and Gynæcology of the British Empire*, October, 1903.

Gardner from the practice of the Maternity Hospital, two had very bad lacerations—one being the case described already. Leopold, one of the strongest advocates of this treatment, has reported seventeen cases *without a laceration of any account*, although in Case II of his first series there was a laceration, for he had to apply stitches on account of the bleeding. That appears to be very satisfactory, especially Leopold's results, but if you read over the cases you will find that only in one was the cervix not dilated to some extent when he introduced the instrument. In his second paper he says:—"The os was, in some, 1 pfennig; in others, 1, 3, 5 mark piece in size."

Now, there are certain factors which influence the occurrence of laceration. Of these I would mention the following:—

1. The manner in which the dilatation is carried out.
2. The number of the pregnancy.
3. The degree to which the cervix has been taken up.
4. The age of the pregnancy.

The influence of the first two is obvious. It is perfectly clear that laceration will be more common when dilatation is carried out rapidly than when it is done slowly, and in primiparæ than in multiparæ. There remains, therefore, only the other two to discuss, and they are really the most important.

With comparatively few exceptions in the cases which have been reported by different writers, the cervix has been taken up already. Simpson, however, has reported one case, and there are fifteen or so reported in Germany, where the cervix was not taken up and the os was not dilated. With time and caution, doubtless these cases, *if at or near term*, can be safely dilated with Bossi's or Frommer's instrument, as Simpson's case illustrates. Some of the worst tears, however, have been in such cases. But, although the unobliterated cervix at or near term dilates wonderfully well, anyone who has dilated to the full extent such a cervix, and then tried to deliver by forceps or by version, will bear me out when I say that the os externum invariably contracts round the head. One is always disappointed; the canal is never so well dilated as one expects.

But to the last factor—the age of the pregnancy. In dilating the cervix in gynecological work, I have more than once found that the cervix gave way, not externally, but internally. I can also remember once having seen the same thing in dilating the cervix in a case of abortion. That this may occur has been pointed out by many, and one of our Fellows, Dr. MacLennan, brought the subject very prominently before us at a recent meeting. It is further borne out by Case XII (abortion at fourth month), which Gardner describes as

follows:—"Two days after delivery, hæmorrhage occurred while an intrauterine douche was being given; examination showed that a clot had been washed from a pit or depression within the cervix." And this brings me to say that the cervix tears readily in the early months of pregnancy, and, consequently Bossi's or Frommer's dilator should be used with great caution in such cases. Also, and this is of the very greatest importance, the tear may not always be external. By that I mean that to the finger from the vagina the vaginal portion of the cervix may appear intact, yet if one carefully examines the cervical canal one will find a tear there. Lacerations are commonest in this group, and the case of extensive laceration described was an illustration of this.

As regards the Bossi or Frommer dilator, I would sum up as follows:—

1. When the cervix is obliterated and the os will admit the dilator without difficulty, dilatation can be carried out in about twenty-five minutes, and there will be little or no laceration.

2. In cases where the pregnancy has advanced to or near term, even although the cervix is not obliterated, dilatation may be accomplished with comparative safety to the cervix, provided care, time, and patience are expended on the operation.

3. In cases of early pregnancy with the cervix unobliterated, there is a decided risk of extensive lacerations, even although the greatest care is taken.

METHOD OF INCISIONS.

There is yet another method of performing "accouchement forcé" which, although not yet practised much in this country, is giving rise to a great degree of interest on the Continent, more especially in Germany, and that is the method by deep incisions of the cervix, and, when the cervix is still unobliterated, the splitting of the uterine wall into the body of the organ. To this latter operation, the name of *vaginal Cæsarean section* has been given by Dührssen. This is the quickest method of all for emptying the uterus. I have said that, roughly, forty to sixty minutes are required for manual dilatation, that about thirty minutes are required for dilatation with Bossi's or Frommer's instrument; with this method of incision, it can be accomplished and the child extracted in five minutes. Let me briefly give you two cases.

One afternoon some months ago I was asked by Dr. Grieve, Langside, to see a primipara who had been twenty-four hours

in labour. I found her having severe pains, which were coming on every few minutes, and with a rigid cervix which admitted one finger. The pulse and temperature were normal, and so I advised waiting, the administration of full doses of opium, hot douching, and, if need be later, cocaine. This was done, but, although she got some rest from the opium, little if any progress was made. After some forty hours, Dr. Grieve again asked me to see her. By this time, I found the os only a little more dilated, the pains still coming on severely, but the temperature fully 100° , and the pulse-rate about 110. The child's heart sounds were also slower. I had no hesitation in saying that the uterus must be emptied. To accomplish this, the choice lay between the use of a Bossi's dilator and deep incision. I chose the deep incisions, which I made on each side—S.E., S.W.—right up to the vault of the vagina. I then ruptured the membrane, applied forceps, and delivered the child without much difficulty and without laceration of the perineum. The operation took from four to five minutes; the child was asphyxiated, but soon recovered. After waiting for the placenta to separate, it was expressed without difficulty. I then douched out the uterus, and stitched up the cervix with catgut. The patient made a good recovery. The temperature continued at 100° or 101° for a few days, and then fell. Some months after, I examined the cervix, and found it had healed perfectly, except on the one side, where there was a slight laceration.

The second case occurred just the other day. She also was a primipara about term, aged 25, and had been sent into the Maternity Hospital on account of eclampsia. She was comatose, and had had many fits; her pulse was about 140. The cervix was obliterated, but the external os only admitted one finger. As the pulse was so unsatisfactory, I decided to incise the cervix rather than dilate with Bossi; I was glad I did so, for the child was saved when otherwise it would almost certainly have been lost. I split the cervix as before, right up to the vault, S.E., S.W., applied forceps, and delivered a live but very deeply asphyxiated child. This was accomplished, without perineal laceration, in four minutes; after some time, the child was resuscitated. It still lives. The placenta was removed, the uterus douched, and the cervix stitched with great care. When the patient left the hospital, the cervix was examined, and my colleague, Dr. Jardine, who kindly examined her also, will bear me out when I say that the wound was quite satisfactorily healed.

Now, the advantages of this method of operation are that

the uterus can be extremely rapidly emptied (four minutes), and that with less shock than when a metal dilator is used. This question of shock is, to my mind, a very important one. I have more than once seen a patient have her heart's action very decidedly affected, and on one occasion I became quite alarmed about a patient on that account. The disadvantages are that the stitching of the cervix is tedious, and, in order to carry it out, one assistant at least is required. While, therefore, it is a more surgical operation, and one well suited for hospital practice, it is not so good for private practice; there the metal dilators have their place, and only should incisions be had recourse to when one feels that every single moment is of value for the safety of the patient, and if the cervix is very rigid.

I have incidentally remarked that there has been recommended by Dührssen, Bumm, and others, within the last few years, a much more extensive incising of the parturient canal, termed *vaginal Cæsarean section*. We have seen that the lacerations that have occurred to the cervix with metal dilators have occurred in cases where the cervix was unobliterated, and especially where the pregnancy has not been very far advanced. Dührssen recommends, when very rapid delivery is necessary, that the bladder should be separated off the anterior cervical wall, and the cervix incised up beyond the internal os. Also, if need be, the peritoneum on the posterior wall should be separated, and that wall incised up the middle line. That is vaginal Cæsarean section, and, you will agree with me, an operation of considerable extent and seriousness. It is an operation, however, which from the first I thought might be useful, for I have performed practically the same operation in removing submucous fibroids; but, as it was an operation of considerable magnitude, I was quite determined not to try it until the case occurred in which it was absolutely necessary.

My patience was finally rewarded. Shortly before I went off duty at the end of October, a case of most persistent vomiting was sent into the hospital. She was a iii-para. Every medicinal remedy had been tried by her doctor. With absolute rest in bed and feeding by the bowel the sickness was arrested, but whenever one attempted to feed her by the mouth the sickness returned. One night the house surgeon informed me that the patient had become very ill, and when I went along to the hospital I certainly found her so. She had been vomiting continuously for hours. Her pulse was about 160 and extremely feeble, and, indeed, she looked as if she had not long to live. I therefore determined to empty

the uterus. After strychnine had been given, a mixture of ether and chloroform was administered. Repeatedly during the operation those in attendance could not feel her pulse. On examining vaginally, I found that the cervix was completely closed, and so rigid and firm that it would only admit a No. 9 Hegar. Do what I would I could not get in a larger one. I have never come across in obstetric work so rigid a cervix. Now, I say, here there was absolutely no alternative in the way of treatment, for if I had plugged or put in tents and waited for the os to dilate sufficiently, the woman would have been dead. The only treatment was vaginal Cæsarean section. I separated the bladder well up, as one does in vaginal hysterectomy, and it slips off the gravid uterus with the greatest ease. I then split the cervix right up beyond the os internum, introduced my fingers, and scooped out the fœtus and placenta. The whole operation took about four minutes. I then douched out the uterus, stitched up the wound, brought the bladder down again and tacked it into its place. The patient, I am glad to say, began to improve very shortly after the operation, and left the hospital in a most satisfactory state. She had no trouble with her bladder, and the wound healed perfectly, there being only a little dimple at the edge of the os exterior.

As regards incisions, I would sum up and say—

1. By this method the uterus can be most quickly emptied, and that without shock, but with the same danger of sepsis as in the methods by dilatation.

2. The operation is more complicated, and requires an assistant apart from the anæsthetist; it is consequently not so well suited for private practice.

3. It is the operation for cases where the cervix being unobliterated and the os being closed (especially in the early months of pregnancy), it is absolutely necessary to empty the uterus in the shortest time.

To complete this subject of “*accouchement forcé*,” I should now refer to the extraction of the child. I have, however, already occupied so much time that I shall not discuss the matter, but simply tell you what my own practice is.

If the child is alive, and I feel I can save it, I extract the child with forceps, unless version and the bringing down of a foot is going to decidedly benefit the mother.

If, on the other hand, the child is dead, and I feel that it is profitless to try and save it, I perform version, and, if need be, perforate the after-coming head.

TWO CASES IN CEREBRAL SURGERY.¹

By JOHN PATRICK, M.A., M.B.,
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THESE two cases were under my care in the Royal Infirmary while on holiday duty for Dr. D. N. Knox, for whose permission to publish them I desire to express my indebtedness.

That they illustrate conditions not commonly met with, that the case of cerebral abscess is in nearly all respects typical, and that the case of syphilitic necrosis of the frontal with sloughing of the dura mater possesses some unusual features, besides being comparatively rare nowadays, are sufficient reasons for their publication now.

CASE I.—Long standing right middle ear disease—Abscess of temporo-sphenoidal lobe—Operation—Recovery—Case first seen on twenty-first day of illness.

J. E. C., 27 years, clerk, was admitted to Ward 29 of the Glasgow Royal Infirmary on 3rd July, 1903, suffering from intracranial mischief apparently following old standing middle ear disease.

The family history and personal history of the patient, apart from this ear disease, are of no moment.

He has been deaf in the right ear as long as he can remember. He cannot tell with what illness the ear trouble first originated, but it certainly dates back to some exanthem probably in childhood. For the past five or six years his attention has been more frequently attracted to the right ear by a slight amount of moisture lying in the external meatus, and within the past year he has had distinct discharge of pus fairly constantly, on several occasions mixed with what he took to be blood. He suffered no pain all these years.

Quite suddenly, three weeks before admission to hospital, he began to feel pain in the right ear, and at the same time had an increase in the quantity of discharge. He consulted an aural surgeon, who evidently at first considered that the symptoms arose from polypi or granulation masses in the middle ear (the tympanic membrane was long ere this almost completely destroyed), and removed several of these, but

¹ The patients were shown and the notes read to the Glasgow Eastern Medical Society on 18th November, 1903.

without any abatement of the pain, which now was felt all round the ear as well as within it, and demanded very frequent application of hot fomentations for its relief. About ten days after the first onset of pain giddiness began, at first slight, as when moving objects passed rapidly before him, then gradually increasing to a strenuous vertigo always present. With it came extension of the pain all over the right side of the head, so severe as to prevent sleep for a week before admission. There was no distinct history of rigors, but on cross examining the patient after his recovery he admitted that on two occasions (one a week before admission while sitting in a park, and the other at home three days before admission) he had a "general cold feeling," which lasted for twenty minutes.

These symptoms persisted with increasing severity till two days before admission, when vomiting began, and continued right on till the operation. Drowsiness also supervened in these two days. By this time it was evident to the aural surgeon that intracranial mischief of some sort was present—"abscess of the brain" was his provisional diagnosis—and he had him quickly transferred to hospital. The last thing the patient remembers is being taken up the hoist to the ward.

Thus, the train of symptoms runs—twenty-one days before admission, acute pain in the ear; ten days before admission, pain all over right side of head, with vertigo; seven days before admission, chilly feeling; two days before, vomiting, drowsiness, and slow cerebration.

His condition on admission, about 8 P.M., was one of semi-consciousness. He answered questions slowly, with great effort, and apparently only after long deliberation, so long that the question was frequently on the point of being repeated just when the answer came. The answers were generally laconic, but coherent; and we were able to get little pieces of information—his name, age, occupation, for instance—with frequent rousings. He quickly lapsed into the somnolent state, and evidently desired above all things to be left severely alone.

Alongside this drowsiness and slow cerebration, great restlessness, culminating in attempts to get out of bed and tear off dressings, was marked; this was due chiefly to the intense pain in the head, which he complained bitterly of, frequently crying out. He was always able to locate the pain on the right side. Percussion of the squamous portion of the temporal increased the pain, but no special increase was noted on percussion of the mastoid process. The percussion

note over the temporo-sphenoidal area was in no way different from that of the unaffected side. There was no mastoid abscess or œdema.

The facial aspect was worried and anxious-looking, brows frequently contracted; the complexion a greyish-ashy hue. The pupils were unequal—the right, dilated and fixed; the left, medium and mobile. No ophthalmoscopic examination was possible.

There was no paralysis of face or limbs, and no aphasia. General muscular weakness was marked.

Vomiting was frequent, and of the cerebral character—effortless. Diarrhœa had been present recently, resulting from purgatives given by his mother to rectify this "attack of the bile," as she considered the vomiting to be; but not very obstinate constipation was the rule.

A very thorough examination of the ear was almost impossible, but a discharge of pus, tolerably profuse, was noted.

The temperature was 102.2° ; the pulse, 60 per minute, rather weak, but of fair volume; the respirations, 30, and regular.

This was his condition when I saw him for the first time about 11 P.M.

The case was obviously one of intracranial mischief following the purulent middle ear disease. The slow pulse, ashy complexion, exact location of pain in right temporal region immediately above the external ear, the dilated fixed right pupil, made me suspect abscess in temporo-sphenoidal lobe, but a temperature of 102° and a respiratory-rate of 30 per minute rather indicated a meningeal infection as well.

Operation.—Next morning, twelve hours after admission, he was taken into the operating theatre. During the night he had had one or two snatches of sleep, and had taken a pint and a half of milk. There was no alteration in the temperature, pulse, and respiration. He was very restless and weak.

A small quantity of chloroform was administered. A curved incision, concavity forwards, was made over the mastoid down to the bone. The flap was turned forwards with the pinna, the bone bared as far as possible, reaching to the bony meatus, so as to expose the whole of the mastoid process. To open up the mastoid cells at once, I began at Macewen's suprameatal triangle. The bone was hard, and my instruments were an ordinary chisel and gouge (a very elaborate electric dental engine driving a rotatory burr being

found to be out of order, and absolutely useless), thus necessitating a tedious operation. An opening in the bone was ultimately made, and membrane lining a cavity, which I took to be the mastoid antrum, exposed. I incised this membrane, and there immediately bulged into the bony opening soft, grey material, which, on lifting with the spoon, proved to be cerebral tissue. At the same moment we perceived a very foul odour, and, on passing a sinus forceps into the cavity, half an ounce of thin watery pus escaped, with flakes of inflammatory exudation and shreds of necrotic brain matter. It was very evident that I had missed the mastoid antrum, and had got into the abscess cavity in the temporo-sphenoidal lobe. The opening in the bone was enlarged, and carried downwards and forwards until the mastoid cells were really reached. These were ablated in a rather imperfect fashion (as the patient's condition by this time appeared to be critical), and communication established between the cells and the external ear through the middle ear. There was little pus in the mastoid cells, and no cholesteatomatous material. The mastoid cells were irrigated through the middle ear in the usual way. The abscess cavity proper was not irrigated, as drainage seemed efficient by means of a rubber tube. The whole operation area was thoroughly dusted with iodoform and boracic powder, and the mastoid cavity and middle and external ears packed with iodoform gauze.

Post-operative condition.—Immediately after the evacuation of the abscess, it was observed that the pulse-rate increased to 72, but in an hour it slowed again to 54. The temperature also came down, and five hours later it dropped from 102° to 99·4°. For some hours the patient was exceedingly restless, tearing off his dressings, and tossing aimlessly on his bed. Thirty grains of potassium bromide had good effect in quieting him for a time.

On the evening of the day of operation, it was noticed that his earthy complexion had given place to a more natural paleness, he was less restless, his pulse-rate was 68, his temperature 100·8°, his right pupil medium and mobile, and he was taking a fair quantity of milk. During the night restlessness again was present, and on two occasions modified Cheyne-Stokes' respiration, with no definite period of apnoea, was observed, lasting each time for an hour.

During the day following the operation he still was restless, but was greatly benefited by a dose of castor oil, and by evening he was much more intelligent, slept for several

periods of an hour, and complained of hunger. That night he slept well, and gave no trouble whatsoever.

By the third day his progress was so rapid, and he felt so hungry, that he had to get a tolerably substantial dinner of chicken soup and rice pudding.

On the fourth day I removed the drainage-tube, and passed a thin strip of gauze in its place.

Three days later (the seventh day), he again complained of headache, he vomited several times, his right pupil dilated—in short, his original symptoms all returned. Re-insertion of the tube gave vent to about two drachms of accumulated thin pus, and soon his untoward symptoms disappeared. From that time onwards his recovery was a steady progress. The tube was finally removed on the eleventh day, and by the sixteenth day he was up and about the ward. He left the ward on the thirty-eighth day after admission, to come back for occasional dressing. The wound did not finally close till three weeks ago—that is, fifteen weeks after operation—although he has been at work for nearly two months.

Present condition.—His present condition is extremely satisfactory; he is well and fit for work. He thinks, indeed, his mental faculties are rather more active than they were before the illness.

In the right ear, the affected one, there is a small amount of bone conduction over the mastoid; there is absolutely no aërial conduction of sound. The tympanic membrane is nearly all destroyed, and the middle ear is filled with granulation tissue, only the short process of the malleous being visible now. There still is some slight discharge present, but he says it is diminishing. In the right eye the pupil is normal, there is some ptosis, and the vision is bad. He is not able to read the largest test-type at 8 feet, but he maintains that that condition was present before the present illness began. Ophthalmoscopic examination reveals no abnormality.

Remarks.—Let me make two more remarks on this case. As regards diagnosis, a temperature of 102° and respirations 30 per minute indicate some condition other than cerebral abscess in spite of slow pulse. In cerebral abscess, temperature is usually normal or subnormal, and respiration-rate 16 to 18 per minute. Probably here there was some encephalitis and some limited meningitis concomitant with the abscess. The re-establishment of the normal pulse-respiration-temperature ratio was complete by the fifth day—76, 18, and 98·4° respectively.

As regards the treatment. It is usual to open up the mastoid cells thoroughly first, and explore the temporo-sphenoidal lobe through the roof of the tympanic cavity; but as I had blundered on the abscess straight off, I was anxious to clear it out quickly and get the patient back to bed, performing the ablation of the mastoid rather hurriedly as the second, instead of the first, stage of the operation. When the patient recovered from his cerebral abscess, I considered the advisability of completing the mastoid operation; but now, when I see him so well, I think it best to let well alone.

CASE II.—*Inherited syphilis—"Syphilis tarda"—Extensive necrosis of frontal bone, with sloughing of dura mater and of portion of frontal lobe—Removal of necrosed bone, followed by hernia cerebri—Treatment by pressure.*

R. E., 38 years of age, married, no family, clothlapper, was admitted to Ward 29 of the Glasgow Royal Infirmary on 4th August, 1903, suffering from foul, discharging wounds of the left forehead.

Present illness and past history.—The story of his illness, as far as he knows, is this. When 13 years of age he began to suffer from his throat, and, from its present appearance of extensive destruction of the soft palate, there being a perforation as large as a shilling, the stunted uvula deflected to the right and held in position only by a thin strand, the remains of the anterior pillars of the fauces, it is evident that gummatus infiltration took place, followed by softening, long-continued discharge of pus, with ultimate healing. For twelve or thirteen years, he had no symptoms. He married at 28 years. His wife, he says, has never been pregnant. Shortly after his marriage, a gumma formed on the right shoulder. This went through the usual course, and healed in about two years. When 30 years of age, a gumma formed on the right frontal bone. It was ultimately put to rights, after destroying a portion of the external table. A few years later (in 1901) gummata formed on the tibiæ; these took two years to heal. Finally, at the end of 1901, when he was 36 years old, the left frontal region exhibited gummata, and it was when these had broken down and he presented two discharging ulcers, with dead bone forming the floor of the upper one, that he came into my hands in the Royal Infirmary Dispensary.

Dispensary treatment.—He was put on active antisiphilitic treatment—potassium iodide and perchloride of mercury, along with potassio-tartrate of iron, and other preparations, as slight

variations in his general condition demanded—that is to say, anæmia, gastric disturbances, &c., and for about a year and a half he most faithfully attended at the dispensary, carrying out his treatment. During that period, I was constantly on the watch for loosening of the necrotic mass of bone, expecting it to be simply, as is usually the case, the outer table, but loosening never took place. He agreed to allow me to attempt to remove the piece of dead bone, and for that purpose came into the ward. At this point, let me interpolate his family history.

Family history.—He is the youngest of three, one of whom died in infancy, cause unknown. The remaining one is a sister, fourteen months his senior, in excellent health, and the mother of nine healthy living children. His father was about 20, and his mother about the same age when he was born. They reached the ages of 42 and 41 respectively—the former dying with “swellings in his legs” and “something wrong with his water,” and the latter (his mother) of an accident. His father was rather addicted to liquor.

This, then, is the position in that family. After a healthy girl—now the mother of nine, as I have said—came the boy, our patient, and after him no more living children, or possibly no more births at all, and yet the father and mother were only about 20 to 22 years of age. With these three premises—a father who took drink and died at 42 with “something wrong with his water”; a syphilitic boy coming after a healthy girl; and no children after him—we may safely conclude that the father was infected with syphilis, and that the syphilis of the boy was inherited, not acquired.

The patient suffers indubitably from inherited syphilis, which, so far as he is able to tell (and his intelligence is above the average), did not appear till he was at least 13 years of age, was quiescent for some fifteen years more, and has manifested itself periodically since. He shows no signs of the ordinary inherited syphilis of infancy; no destruction of nasal bones with characteristic saddle nose; no bosses on the skull; no muddiness or fault in the complexion; no keratitis. His incisors are gone, so that one definite sign cannot be considered. It is possible that the constitutional changes incident to puberty might account for its first appearance at or about 13 years of age, and it may not be too far fetched to suggest that the rousing of sexual instincts incident to marriage might account for its second appearance fifteen years later. Fournier reports a case where infantile inherited syphilis in a girl was treated successfully, and remained

quiescent till puberty, when an abundant squamous syphilide appeared all over the body. In two words, this case is *syphilis tarda* ("retarded syphilis"), as described by Fournier, Hutchinson, Berkeley Hill, and others; Hutchinson maintaining that infantile manifestations are not essential, the others that infantile evidences of inherited syphilis are essential, always present, though they may have been overlooked. Let me quote Hutchinson to you:

"That there are many in whom, for all practical purposes, infantile symptoms are omitted, I have not the slightest doubt. I have seen many cases of keratitis at puberty, or of bone or throat affections of undoubted character, and with a clear history of parental disease, in which nothing whatever had been observed in infancy. I have seen many times a well-developed nose with a narrow bridge, a well-formed forehead, and good complexion, in conjunction with keratitis of the most definite kind, and with corroborative facts of the clearest nature. Sometimes the teeth in such cases may be typically malformed, but this is rare. We may take it as certain that, when the bridge of the nose remains narrow, no material degree of snuffles was ever present; and that, if the complexion is good, there was no rash on the face.

"We must admit that a taint of inherited syphilis may remain latent, until at, or even considerably after, the age of puberty it may manifest itself by a severe attack of interstitial keratitis, by deafness, nodes, specific lupus, or ulceration of the palate."¹

State on admission.—On admission to the ward, the patient's general health was excellent. He had been working regularly up till the day he came in; his appetite was good, his temperature normal, his only annoyance being the fœtid discharge from the necrosed bone in the forehead. There is a large perforation of the soft palate, and some destruction of bone in the posterior nares. There are also cicatrices on the right shoulder, both tibiæ, and right frontal bone. The latter is punched-out in appearance, due to destruction of the bone. On the left frontal region, there were several discharging wounds and ulcers, the floor of which consisted of bare bone, hard, and brown in colour. The odour from the wound was exceedingly offensive, so that other patients in the ward could not sit at table with him.

Operation.—The operation presented no difficulty. Chloroform was the anæsthetic employed. Bridges of skin were cut through, the edges of the ulcers scraped, and the scalp dissected

¹ Hutchinson, *Syphilis*, pp. 413, 414.

away from the necrosed bone, so that a margin of healthy bone was exposed. The dead bone presented a greenish colour and worm-eaten appearance, and, except for one small piece the size of a shilling (the brown-coloured mass mentioned), the outer table was gone. The bone could not be removed *en masse*, and had to be removed piecemeal, its odour being most abominable. Removal of the bone exposed the dura mater to the extent of a circular area $2\frac{1}{2}$ inches in diameter. The dura, instead of being, as I expected to find it, a thickened but otherwise healthy membrane, was a foul, green slough, covering the whole floor of the wound. It was not thought wise at this stage to attempt to remove the slough, as it felt so thick that a moderate layer of frontal lobe must have sloughed also. The bony edges of the wound were rough and jagged, and a chisel and gouge were used to smooth them out till a ring of healthy bone appeared all round. The bone generally was hard, and in some parts very thick, up to half an inch. The wound was then freely irrigated, dried, dusted plentifully with iodoform and boracic, and covered with a light thick pad of iodoform gauze, to exercise some pressure and do something to prevent a hernia cerebri.

Post-operative results.—The patient was none the worse of the operation, and beyond a rise of temperature to 99° on the two days following, there is nothing to note of its immediate results, except the disappearance of the foul odour and the consequent increased comfort of the patient. The temperature after the fourth day fell to its normal, which apparently is rather below the ordinary normal, and so remained. By frequent dressing and irrigation, the wound improved till, by the eighteenth day, the slough of dura and brain was all gone. By that time, however, the underlying brain had begun to bulge, and before long a prominent hernia cerebri was formed as big as a Victoria plum. The treatment of this hernia was the next consideration. It proved easier than anticipated. The dressing of the wound was now done as infrequently as possible. It consisted of a thick iodoform gauze pad on the surface of the hernia, covered with pads of sterilised gauze, the whole bandaged firmly with the elastic pressure of a gauze bandage. Herniæ cerebri have little cerebral tissue in them, and are quite insensitive. The patient accordingly had no headache or annoyance whatever from the pressure. By the sixth week after operation, the granulation layer forming the floor of the wound was level with the surrounding scalp. The patient then went home (22nd September, 1903), and attended for dressing, and does so still twice weekly.

Present condition.—At present there is, where the left frontal eminence should be, a depressed granulating wound, $2\frac{1}{4}$ inches in diameter, the granulations being continuous down through a perforation of the anterior part of the orbital plate through the infundibulum into the posterior nasal cavities. The pulsations of the brain are visible in the wound. As regards his present general condition, he feels in first class health, and has been working regularly since leaving the infirmary. He has no headaches, and no mental deficiencies.



R. E., present condition (February, 1904).

Senses of smell and taste are quite acute. Hearing in right ear is defective. He hears the watch only on contact and by bone conduction. The membrane is retracted, and there is a cicatrised perforation, but no tinnitus or vertigo, so I am inclined to think there must have been present some middle ear disease, not labyrinthine. He has no recollection of ear mischief, and it may be noted that Fournier describes a painless otitis media. In the right eye, it looks as if he had had an iritis, although iritis is a secondary, not a tertiary, lesion. There is no sign of keratitis.

Remarks.—This condition of syphilitic frontal necrosis was designated by older writers the “corona veneris.” The science of bacteriology has much to answer for in depriving us moderns of the power to give such picturesque names to diseases. No right-minded surgeon or pathologist to-day would call a thing the “crown of Venus”; he would be compelled to speak in terms of some bacillus or micrococcus, with not less than three mouth-filling words, mostly hybrids, to its name. In this condition, there are two processes at work—

1. A gumma formation arising in periosteum or medulla, and having as its remote result death of the bone and formation of a sequestrum, which may consist of outer table alone, inner alone, or, as in this case, the whole thickness of the bone.

2. Chronic osteitis, with great increase in thickness of the bone. In this case the frontal, normally about one-eighth of an inch thick, became at one point half an inch thick.

Another point I wish to make is to note that this man remained, to all intents and purposes, well and fit for work, without symptoms, with a large slough a quarter of an inch to three-eighths of an inch thick, $2\frac{1}{2}$ inches in diameter, composed of brain tissue, with the dural covering. It is surprising that he escaped septic thrombosis of veins and suppurative meningitis: it is explicable only by considering the exceeding slowness of the process, giving the brain time to build for itself barriers between the living and the dead, and the dura time to be attached to the inner table. This fixation process must have extended downwards towards the orbital plates, for, in the course of the operation, the gouge slipped off the edge of bone and rammed into the mass of slough to the depth of over an inch. I dreaded the result of this little accident, but nothing went wrong. It is truly marvellous what the frontal lobes will tolerate.

Finally, I do not think we need be apprehensive of future trouble from fits or symptoms of brain-anchoring. The covering of brain must be thin, so it will be advisable, if possible, to cover the wound with the entire thickness of skin by grafting or plastic operation. Whether an aluminium or other plate will be introduced is still under consideration. Happily, the patient is a peace-loving Paisley body, and not likely to be involved in any melee where a chance blow might find his soft spot unprotected.

DESCRIPTION OF A PORENCEPHALIC BRAIN.

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THE following description of a porencephalic brain is written after the organ has been for some years in alcohol. The clinical and *post-mortem* notes are extracts from the Asylum case-books and pathological records respectively. The brain was shown by Dr. Oswald at a meeting of the Glasgow Pathological and Clinical Society, held on 14th October, 1901. The photographs were taken by Mr. Robert Collins, carpenter to the Asylum.

Clinical note.—The patient is said to have been paralytic and imbecile from birth. He was also epileptic. His conversation is described as having been rambling. It is noted that one arm was useless from infantile paralysis. A further description of the physical condition is given by Dr. Oswald (*Glasgow Medical Journal*, December, 1901, p. 435) as follows:—"He exhibited a partial hemiplegia affecting the right arm and leg. These were smaller than the left. There was slight movement of the right fore-arm and fingers, and he could bring the arm out from the side. The leg was less atrophied than the arm, and he could walk, but with a dragging movement. There were no athetoid movements of the fingers." Death took place from pneumonia, at the age of 37 years.

Post-mortem note.—The skullcap is small. Its thickness is increased, especially posteriorly. The density is increased. It is asymmetrical, the left side being the smaller. The base of the skull is asymmetrical, smaller on the left side. The brain is porencephalic. (Dr. Oswald mentions (*loc. cit.*) that on the left side there was a large cyst, containing fluid.) The basal vessels are normal in size and arrangement. There is no atheroma.

External appearances.—There is distinct atrophy on the right side, more marked in the arm than in the leg. There is no shortening of the leg. There are remains of old external ulcers on both legs.

Thorax.—The heart is normal. There is evidence of lobar pneumonia (grey hepatisation) in both lungs, and of advanced tubercular disease.

Abdomen.—The liver and spleen are normal. There is some

atrophy of the kidney cortex, but the capsule strips easily. Other organs are not examined.

General description of brain.—After hardening in spirit, the weights are as follows :—Brain, 795 grammes; right hemisphere, 434 grammes; left hemisphere, 229 grammes; cerebellum, pons, and medulla, 124 grammes.

The organ has been stripped. The cerebral hemispheres are



FIG. 1.

asymmetrical, the left being the smaller. It weighs 205 grammes less than the right one, and its measurements are all shorter (Fig. 1).

Right hemisphere.—The right hemisphere is now of small size. Its convolutions are small and simple, and there is evidence of slight wasting in the frontal, central, and superior parietal regions, and in the supramarginal and first temporal gyri. Wasting is most marked at the anterior pole of the

hemisphere. The general arrangement of sulci and gyri is normal (Fig. 1, p. 192). The corpus callosum is much diminished in size throughout its whole length, and, at a distance of 2 to 3 cm. anterior to the splenium, is not more than 1 mm. in thickness. The fornix is much diminished in size, but its anterior pillar can be traced into the right corpus albicans. The anterior and posterior commissures are distinct. The middle commissure is represented by a minute tag of tissue (not seen in Fig. 2). The pineal gland is comparatively of natural size. It contains a cavity the size of a millet-seed. The septum lucidum has a wide perforation (Fig. 2). The island of Reil is natural.

Left hemisphere.—The left hemisphere is very small compared with the right one. Its convolutions are all small, some



FIG. 2.

of them exceedingly so. The frontal lobe is narrow, and a cavity extends across it whose lateral opening is in approximately the position of the third frontal gyrus. The opening is bounded in front by convolutions of the frontal lobe, which have a radial arrangement round it. Posteriorly, the lower part of the central region, which is very irregular, rough, and nodular in appearance, bounds the opening above; while inferiorly, it is bounded by a small single gyrus of the insula, and by the first temporal convolution, which is an almost straight, narrow band. Contiguity of the central and temporal regions forms the posterior limit of the opening. Mesially, the cavity is bounded by the perforate septum lucidum. The cavity is irregularly fusiform, and is continuous behind with

the dilated lateral ventricle. Its interior is smooth, and covered by ependyma. Opposite the posterior half of the opening, the prominence formed by the basal ganglia is seen (Fig. 3). The corpus callosum is very thin. The fornix is very small, but its anterior pillar is distinct. A small choroid plexus is attached to its body. The left corpus albicans is smaller than the right one. The foramen of Monro is wide enough to admit an ordinary lead pencil. The corpus striatum is absent from its usual situation. The optic thalamus is very small. The anterior and posterior commissures are distinct. The middle commissure is represented by a minute tag of tissue (Fig. 4, p. 195).



FIG. 3.

Sulci and gyri of the left hemisphere.—The anterior limb of the fissure of Sylvius is normal. The sulcus cannot be traced with certainty beyond this. The fissure of Rolando extends well into the paracentral lobule. At its origin, it is curved, with the convexity forwards, but after reaching the lateral surface it has a straight course over the upper third of the hemisphere, and appears to end at a point 2.5 cm. from the great longitudinal fissure. The parieto-occipital, collateral, and calloso-marginal sulci have the usual course. The pre-central sulcus is complete, and does not cut the upper border of the hemisphere. The ascending limb of the intra-parietal sulcus is very short, being parallel with the short central fissure. Its horizontal limb is natural. On the lateral aspect of the frontal lobe, there is only one sagittal sulcus. On the

orbital surface, the transverse sulcus is short, and only one sagittal sulcus communicates with it. The first temporal sulcus seems to be interrupted by the irregular gyri at the lower end of the central region. The other sulci of the temporal lobe are present. A short sulcus separates the central gyri from the rough area below them. The central gyri are both exceedingly small and simple. They join one another below the short central fissure. The gyri of the superior parietal lobule are also exceedingly small. Those of the inferior parietal lobule and of the occipital lobe are, comparatively, of good size. The first temporal gyrus is very thin and quite simple. The other gyri of this lobe are of



FIG. 4.

comparatively good size. A small gyrus represents the post-central lobule of the insula. This is just visible in Fig. 3 (p. 194), in the shadow of the Sylvian fissure. On the mesial aspect, the gyri of the cuneus, of the quadrate and paracentral lobules, of the posterior third or so of the frontal lobe, and the callosal gyrus, are all exceedingly small (Figs. 3 and 4, pp. 194, 195).

The cerebellum is comparatively of good size. Its hemispheres are of equal size and weight (Fig. 5). The corpora dentata and the arbor vitæ are natural. The crus cerebri, pons, and medulla are all smaller on the left than on the right side (Figs. 2, 4, 5, pp. 193, 195, 196). The corpora quadrigemina do not appear to differ in size on the two sides.

Frontal sections are made at corresponding points of each

hemisphere, and are examined from behind. One of these is photographed (Fig. 6, p. 197).¹

All sections of the cerebrum show comparative smallness of the left hemisphere, dilatation of the left lateral ventricle, and thinness of the corpus callosum. The following points are noted in addition :—Section 1, through the genu of the corpus



FIG. 5.

callosum. The anterior boundary of the cavity, and of its lateral opening, are seen on the left side. Section 2, midway

¹ The sections of the right hemisphere were compared with similar sections from the right hemisphere of a demented woman who died at the age of 53 years. The only differences noted were, that in the porencephalic brain, the hemisphere had been compressed vertically in hardening ; that two of its sections (3 and 4) were thicker than those of the other brain (which was hardened in formalin), and that its corpus callosum and fornix were both comparatively very thin.

between the genu and the anterior commissure. The corpus striatum, internal capsule, insula, and olfactory tract, all present on the right side, are absent on the left. The cavity, with its lateral and mesial openings, is seen, and only the tip of the temporal lobe on the left side: whereas, on the right side, a much larger portion of this lobe is cut. Section 3, through the anterior commissure. On the left side, the fornix is absent. The cavity, with its lateral and mesial openings, is present, and in its floor is a conspicuous rounded prominence

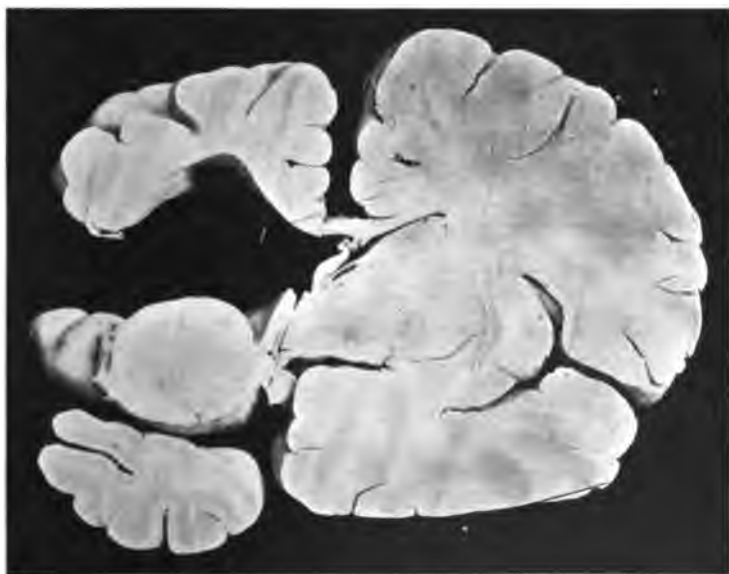


FIG. 6.

formed by the corpus striatum and internal capsule, between which and the temporal lobe there is only a small amount of white matter. The left insula is absent. The beginning of the left olfactory tract is seen. The optic tract and the nucleus amygdalæ, both present on the right side, are absent on the left (Fig. 6). Section 4, through the corpora albicantia. On the left side, a thin fornix is now seen. The foramen of Monro is present in both sections, but is farther back on the left side. There is a prominence in the outer wall of the widely dilated left lateral ventricle, which corresponds to the roughened area below the central region. A portion of

the left insula is present. The forepart of the left corpus striatum and of the internal capsule is now seen, and the beginning of the left optic thalamus and hippocampus. On the right side, the tag representing the middle commissure is seen about the middle of the slice (which is 1 cm. in thickness). On the left side, it has been divided. The infundibulum, the optic tracts, and the corpora albicantia are seen on either side. Section 5, midway between the corpora albicantia and the splenium. On the left side, part of the continuation of the body into the descending horn of the lateral ventricle is seen. In the floor of the body are two prominences, the inner one formed by the caudate nucleus (which appears to terminate at or near the point of section), and the outer, by the partial infolding of the rough and irregular gyri in the lower central region. The *tænia semicircularis* is not visible on the left side, and the gyrus, representing the insula, is no longer present. The fornix is seen on either side, extremely thin on the left, with the choroid plexus projecting from its free border, and the velum interpositum beneath it. The optic thalamus is present in each hemisphere. On the left side, the continuation of the crusta into the internal capsule and the subthalamic region are not seen, and the thalamus therefore appears to be contiguous with the choroidal fissure.

The posterior horn of the lateral ventricle reaches to within 2 cm. of the posterior pole of the left hemisphere; whereas on the right side it terminates 5 cm. from this point. The choroid plexus in each descending horn is cystic. The ependyma of the left lateral ventricle is thicker than that of the right.

The above sections are fixed in position by wires, and a horizontal cut is made just beneath the body of the corpus callosum. The basal ganglia on the left side are smaller than on the right, and do not extend either as far forwards or as far back as do those of the right hemisphere. Part of the right corpus striatum is removed by this section, whereas the left one is well beneath the plane of section, the basal ganglia on this side being at a much lower level, in addition to being placed farther backwards.

A section through the pons shows the left half to be distinctly smaller than the right. In a section through the medulla, the left pyramid is seen to be extremely small. The left interolivary lemniscus is also distinctly smaller than the right. In the dorsal spinal cord, the right lateral and posterior, and the left anterior columns, are small compared with the corresponding regions of the opposite sides.

Microscopical examination.—Pieces are taken from the left hemisphere as follows:—1, Ascending frontal gyrus (top); 2, paracentral lobule; 3, radial gyrus at anterior end of lateral opening; 4, first temporal gyrus; 5, from the rough area below the central gyri. The following points are noted. In Nos. 1, 2, 3, and 4, the cortex is exceedingly narrow (1.35 mm.). The general arrangement of cell layers is natural, except that in Nos. 1 and 2 a distinct layer of granules is present among the largest pyramids. In Nos. 1, 2, 4, and 5, all the pyramidal cells are exceedingly small, and the largest ones show, in addition, some degenerative changes (chromatolysis, eccentricity of nucleus, deficiency of processes, and the presence, in many cases, of small round cells near or attached to them). In No. 3, the pyramidal cells are of comparatively good size. In No. 4, the pyramids of the first layer (of pyramids) are very few in number. In No. 5, several gyri are represented in the piece removed. In only one or two places is section of the cortex vertical, and it is, at these points, extremely narrow, measuring only .75 mm. The different layers of cells are, however, represented. There is a superficial gliosis between contiguous gyri, the neuroglia cells being very small. Sections are made also from the right ascending frontal gyrus (top). The cortex here is comparatively broad (1.95 mm.). In one half of the section, Betz cells are numerous; in the other half they are absent. There is no layer of granules. The pyramidal cells are of fair size. The Betz cells show the same degenerative changes as do the large pyramids of the left hemisphere, and many of them have, in addition, an accumulation of pigment. In sections from the right and left clivus of the cerebellum, no difference between the two can be detected, further than that the laminæ of the right clivus are, if anything, more slender than those of the left.

In all of the above, with the exception of No. 5, the neuroglia is natural. There is in all a marked perivascular increase of cells.

The spinal cord is so brittle that sections of it cannot be made.

CURRENT TOPICS.

GLASGOW AND WEST OF SCOTLAND MEDICAL ASSOCIATION ("GLASGOW MEDICAL JOURNAL") ANNUAL MEETING.—The Annual Meeting of the Association was held in the Faculty Hall, on 29th January. The President, Dr. Robert Pollok, occupied the chair. The minutes of last meeting were read and approved. The Treasurer, Dr. Geo. Henry Edington, then submitted his report, which showed that the finances of the Association were in a satisfactory condition. There was again an increase to be recorded in the number of subscribers to the *Journal*. The Editors' Report, submitted by Dr. T. K. Monro, gave a brief summary of the work done by the *Journal*. The following appointments were made for 1904:—

<i>President,</i>		DR. ROBERT POLLOK.
<i>Vice-Presidents,</i>		{ DR. W. K. HUNTER. DR. ALEC R. FERGUSON.
<i>Editors,</i>		{ DR. THOMAS KIRKPATRICK MONRO. DR. GEORGE HENRY EDINGTON.
<i>Secretary,</i>		{ MR. JAMES GRANT ANDREW, 12 Woodside Terrace.
<i>Treasurer,</i>		{ DR. GEORGE HENRY EDINGTON, 225 Bath Street.
<i>Auditors,</i>		{ DR. JOHN WAINMAN FINDLAY. DR. H. H. BORLAND.

General Business Committee.

DR. JOHN ROWAN.	PROF. CHAS. WORKMAN.
DR. WM. G. DUN.	DR. J. WYLLIE NICOL.
DR. P. S. BUCHANAN.	DR. JOHN W. FINDLAY.
DR. ARCH. YOUNG.	PROF. ROBERT MUIR.

UNIVERSITY OF GLASGOW: "FINAL YEAR" (MEDICINE) DINNER.—This function took place on the evening of 26th ult. in the "Grosvenor" Restaurant. Professor McCall Anderson occupied the chair, and the guest of the evening was Sir William Taylor, M.D., K.C.B., Director-General of the Army Medical Service. The Director-General, whom many of the profession in Glasgow remember as a student of the old College in the High Street, was received with great enthusiasm when he rose to reply to the toast of "The

Imperial Forces." After giving some reminiscences of his student days in Glasgow, he advised those who wanted a life of adventure and independence, and to see the world, to join the service. Before leaving, each diner received a reproduction of the clever Dinner poster by Mr. H. G. Anderson, one of the "Final Year."

SCOTTISH VOLUNTEER MEDICAL OFFICERS' ASSOCIATION: SCOTTISH VOLUNTEER AMBULANCE TROPHY.—The Trophy, value £300, raised by subscriptions from many prominent Scotsmen, is now *in esse*, and on the 25th of last month was handed over to the Corporation for safe keeping, pending the result of the first competition. The presentation was made by Surgeon-General Sir William Taylor, K.C.B., the Director-General of the Army Medical Service. There was a large and representative attendance of Volunteer Medical Officers and others, including the Marquis of Graham, Commanding the Clyde Division of the Royal Naval Volunteers; Colonel Trevor, P.M.O., Scottish District; Lieutenant-Colonel Beatson, C.B., Commanding the Glasgow Companies R.A.M.C. (Vols.); Colonel Macfarlane, 1st Lanark Rifles; Sir Hector Cameron; Bailie Sorley; Major Quintin Chalmers, President of the Association; and Captain Halliday, Secretary. In making the presentation, the Director-General paid a graceful tribute to Glasgow's share in the medical work of the recent war. The Lord Provost, Sir John Ure Primrose, Bart., accepted the Trophy on behalf of the Corporation, and promised to fulfil the wishes of Sir William Taylor by placing it in the Art Galleries at Kelvingrove. The usual votes of thanks having been proposed, the meeting separated.

NEW PREPARATIONS, &c.

WRIGHT'S LIQUOR CARBONIS DETERGENS (London: Wright, Layman & Umney, Limited).—We have recently received a sample of this well-known alcoholic solution of coal tar. The preparation has been so long and so favourably known to the profession that it is unnecessary to give it a detailed notice here. Diluted with a large amount of water, it is one of the best local remedies for itching, while, in a more concentrated form, it may be used as a stimulating application in chronic diseases such as eczema. After a long experience of it, we can thoroughly recommend it.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1903-1904.

MEETING I.—2ND OCTOBER, 1903.

The President, DR. DAVID NEWMAN, in the Chair.

I.—REMARKS BY THE PRESIDENT.

GENTLEMEN,—You have offered me the highest honour that is in the power of this Society to bestow on one of its members, in electing me to preside at your meetings, and I cannot but deeply feel this distinction in that it has been conferred at an early period in my professional career. The position has not been of my own seeking—it has come as a spontaneous gift from you; not on that account only do I esteem it a high honour, but when I look back upon the Presidents of the Society whom I have known, and the still longer list of those distinguished men who have occupied this chair prior to my time, I cannot help appreciating the high privilege you have offered to me. For your confidence, accept my sincere thanks, and I pray you to extend the same kindly feeling and support during my term of office. It shall be my endeavour to promote by every means in my power the best interests of the Society. Within recent years a new practice has been introduced—it cannot be called an institution, it is too modern, and still less is it a custom; may I call it an innovation—that on taking the chair the President is required to inaugurate his term of office by an address. I should have preferred to accept your favour without any burden being attached to it, but as the two conditions appear now to be bound together, I shall conform to the rule, not at the present time, but with your indulgence at a future meeting of the Society, when I purpose bringing under your notice a subject which has been of great interest to me—one which I trust I will be able to make of some interest to you.

At a meeting of the Council, held a few nights ago, arrangements were made for the conduct of the business of this session,

and in order to make the meetings as instructive and attractive as possible, several evenings are to be devoted to the discussion of subjects of general interest to the profession.

On glancing over the *Transactions* of the Society, one cannot help observing the comparatively few contributions which have come from general practitioners, on the one hand, and the senior members of our hospital staffs, on the other. The main bulk of the work is done by comparatively junior men engaged in hospital practice, and not only the amount of work, but the high quality of it, is greatly to their credit. I should, however, like to see more general practitioners taking part in the work of the Society, as it is of great importance that we should know their views and understand disease as it is presented to them. There are many ailments familiar to them which do not come within the cognisance of the hospital physician or surgeon, and I feel certain that the Society will always be interested to hear what they have to say, and to see them present at our meetings.

II.—COXA VARA.

By DR. H. RUTHERFURD.

Dr. Rutherford showed a patient, aged 42, the subject of bilateral coxa vara. The features of interest were—(1) The high degree of deformity in the vertical direction, the trochanters being on a level with the anterior superior spinous processes; (2) the slight ascertainable deformity in the transverse plane, with the absence of cross-legged deformity; (3) the late development of the condition; (4) its apparent production by an overstrain at the age of 34.

Photographs and skiagrams were shown, along with skiagrams of cases in young subjects, with reference to the influence of rickets, also plates by other observers, particularly the accounts and plates of Keetley and Whitman.

III.—GOITRE SECONDARY TO SEPTIC ENDOMETRITIS.

By DR. H. RUTHERFURD.

Dr. Rutherford showed a specimen of goitre, consisting of the right half of the thyroid, which presented centrally a cyst the size of a walnut, with thick fibrous walls, and in the thyroid tissue numerous round-celled masses, apparently inflammatory, but in which no micro-organisms could be stained (formalin and alcohol).

The tumour was said to have followed an attack of acute rheumatism. There was moderate enlargement of the remaining portion of the thyroid.

It was found on inquiry that the patient, a married woman of 29 years, had immediately before the attack of acute rheumatism been subjected to curetting for endometritis, and that some leucorrhœa persisted.

The tumour was successfully removed under local anæsthesia, with eucaïne 1 in 100 salt solution.

The patient was a native of Liverpool, where she had been until three or four years ago, when she came to the Hamilton district.

IV.—EPITHELIOMA OF LOWER JAW AND TONGUE.

BY DR. H. RUTHERFURD.

Dr. Rutherford showed a specimen consisting of the right lower jaw and corresponding half of the tongue, with salivary and lymphatic glands, successfully removed from a man, aged 45.

It was difficult to introduce a finger between the teeth, and the patient was much reduced. Preliminary ligature of the external carotid was done. Patient put on flesh, and was able to masticate satisfactorily, though at first the displacement of the left half of the lower jaw interfered with this. Six months after operation there was apparent recurrence in the pterygoid fossa, but the man's general condition continued to be markedly improved.

V.—CASE OF PERSISTENT UNILATERAL TREMOR.

BY DR. T. K. MONRO.

Lizzie C., æt. 16, wirewinder, a patient of Dr. J. M. Ramsay, was admitted to the Glasgow Royal Infirmary on 9th September, 1903, on account of constant trembling of the right arm and leg.

Exactly seven weeks before admission, she was seized one forenoon, while at work, with the symptom now complained of. The condition has remained practically unchanged ever since.

The attack began with a sense of turning round or "dizziness in the head," and this was followed immediately by trembling in the right arm, and then by trembling in the

right leg. She thinks all three phenomena may have set in within a small fraction of a minute. There was no loss of consciousness or disturbance of speech, and she did not fall. On the day of onset, some movements were noticed about the right cheek and eye, but patient herself was not conscious of these.

The tremor is most marked in the upper limb, where it is almost confined to below the elbow. It is coarse and rhythmical, but not quite regular in range or even perhaps in time. While involving the fingers, it is most striking in the pronators and supinators. An occasional movement can be detected as high as the shoulder girdle. The frequency of the oscillations is 120 or more per minute. Sometimes there has been pain in the affected limb; at first this was at the middle of the upper arm, but more recently it has been seated about the middle of the fore-arm. The power of the limb is much reduced, the dynamometer registering only 8 kg. for the right, as against more than twice that amount for the left hand, although patient is naturally right-handed. There is, however, no local palsy or atrophy, and, indeed, the girth of the affected limb is slightly greater than that of the other.

In the case of the lower limb, the movement is best seen in the foot and ankle. Extension and flexion of the ankle, and lateral movement at the same part, are especially conspicuous. Some tremor, however, may be observed above the knee. At one time this is obviously accounted for by the shaking of the limb lower down, but at another time the thigh muscles are themselves the seat of occasional jerks. The power of the muscles in this limb is reduced, and ankle-clonus is obtainable on this side. The girth of the calf is the same as on the other side.

The tremor ceases completely during sleep. It is aggravated by excitement, but it cannot be said to be either increased or diminished by voluntary effort.

No involvement of the face can be detected either at rest or in voluntary or emotional movement. There is, though not constantly, a just recognisable deviation of the tongue to the right.

The muscles of the trunk are unaffected.

Sensation is unaffected. There has been no headache, vomiting, or failure of vision; and examination of the lungs, urine, and ocular fundi has revealed nothing abnormal. There is a systolic murmur at the apex of the heart, and a murmur of the same rhythm can be less distinctly recognised over the right ventricle and at the pulmonic area.

Patient had measles while at school, but no scarlet fever, rheumatism, or other disease, so far as her sister could remember. The only possible cause which can be suggested for her symptoms, apart from the cardiac condition, is a slight disagreement with one of her employers, which took place on the morning on which she became ill, and may be supposed to have caused some emotional disturbance.

The treatment that has been already employed, though without avail, has included Fowler's solution, antipyrin, an ice-cap over the head, and liquid extract of ergot (1 dr. every three hours).

Note.—It was suggested that the tremor might be the result of embolism, but the question of functional disturbance was raised by other members of the Society. The question is a difficult one, since emotion, which may not only give rise to hysterical phenomena, but may also cause pallor and flushing, may well be regarded as capable of causing the displacement of a thrombus or vegetation. Among the points which seem to favour, while not proving, an organic cause, are the following:—(1) The cardiac murmur; (2) the hemiplegic distribution of the tremor and weakness; (3) the presence of ankle-clonus; (4) the fact that at the sudden onset of the symptoms, movements were noticed in the cheek and eye of the same side, suggesting that the abrupt occurrence of a vascular lesion disturbed a greater extent of brain tissue than was actually damaged; and (5) the fact that similar tremor may be met with under circumstances which appear to exclude hysteria. Four days before I saw this case, I was consulted by a patient, sent to me from Lugar by Dr. Farries, with the same conspicuous symptom. Here the tremor was mostly above the middle of the left fore-arm, and had developed gradually during some six months. Weakness could be made out in the left upper and lower limbs, and there was pain in the back of the head and neck on the left side. As the patient was an elderly man, with no signs of heart disease, the condition was probably attributable to atheroma of the cerebral vessels.

VI.—CASE OF DIFFUSE SYMMETRICAL SCLERODERMA CHARACTERISED BY INVOLVEMENT PRINCIPALLY, AND AT FIRST ONLY, OF THE LOWER LIMBS.

By DR. T. K. MONRO.

Dr. Monro's paper will be found as an original article in our issue for December, 1903, at p. 417.

VII.—OVA AND EMBRYOS OF BILHARZIA HÆMATOBIA.

BY DR. F. J. LOCHRANE.

Neil F., æt. 26, a soldier, was admitted to the Glasgow Royal Infirmary, under Dr. Monro, on 25th August, 1903.

The onset of the illness took place two and a half years ago in South Africa, blood being passed in the urine for the first time. Since that time the act of micturition has been peculiar in that the stream is always clear, while the ejaculatory act is bloody. There has been no physical discomfort except occasional perineal itching after micturition. Patient had no other illness in South Africa. Physical examination reveals no abnormality. Blood examination shows nothing abnormal.

Benzoic acid (10 grs. three times a day) was administered without obvious effect. Under methyl blue (4 grs. three times a day) the quantity of blood voided diminished. When the administration was stopped, it increased again.

The specimens shown are—

1. Ova—killed by moderate heat and mounted in glycerin.
2. Ova as they were passed, *plus* water.
3. Embryo lying beside the empty shell.
4. Living embryo, obtained by adding water to the blood as passed, and keeping at a gentle heat for an hour.

MEETING II.—16TH OCTOBER, 1903.

The President, DR. DAVID NEWMAN, in the Chair.

I.—CASE OF CYSTIC TUMOUR OF THE RIGHT OVARY WHICH WAS STRANGULATED BY TWISTING OF THE PEDICLE.

BY DR. DAVID NEWMAN.

M. M'D., aged 28, was admitted to the Glasgow Royal Infirmary on 30th August, 1903. Four days prior to admission the patient was suddenly seized with acute pain in the region of the umbilicus, and as this did not abate her family doctor was sent for. From the onset of the pain until the time of admission, there was no movement of the bowels, even after the use of laxatives and enemata. On this account the doctor

who saw her feared the case to be one of acute intestinal obstruction, and sent her to the hospital for immediate operation. On arriving at the hospital a little after 6 P.M. the temperature was found to be subnormal, the pulse 132 per minute. The patient was well nourished, but extremely pale in colour. On physical examination, the abdominal wall was seen to be bulging slightly on the right side, and on pressing this swelling considerable pain was produced. On percussion, a dull area was found, extending from the anterior superior spinous process upwards and inwards to the inner margin of the cartilage of the twelfth right rib. It then extended directly inwards to within an inch and a half of the middle line, downwards to the umbilicus, and then directly downwards in the middle line.

Examination per vaginam.—The os was soft, with the lips gaping, and there was a distinct bulging in the pouch of Douglas on the right side. Shortly after admission to the ward, the patient vomited a considerable quantity of greenish fluid, and she stated that on the day previous a similar quantity of fluid had been ejected. As the case seemed to be very urgent on account of the great prostration of the patient, Dr. Newman was at once sent for. On his arrival at 7 P.M., the abdominal swelling was found to have increased considerably in size, and now passed 2 inches to the left of the middle line, at and above the level of the umbilicus. The pulse was extremely weak and thready, and the pallor of the skin was very marked. From the character of the pulse, and the fact of rapid increase in the size of the swelling, Dr. Newman came to the conclusion that the patient was suffering from internal hæmorrhage, and resolved to open the abdomen at once. On doing so he found an ovarian cyst of considerable size, and on introducing a trocar, above 20 oz. of almost pure blood escaped. When the pedicle was exposed, it was found to be twisted and strangulated from rotation on its long axis. There was a clearly marked line of demarcation between the strangulated and non-strangulated part. The cyst was removed, and the vessels of the pedicle ligatured. The patient made a rapid recovery and was dismissed well.

Remarks.—Strangulation of an ovarian cyst, as seen in the above case, is so rare that I deemed it worthy of the notice of the Society. To my mind the question of diagnosis was between hæmorrhage into a cyst and an extra-uterine pregnancy; but, considering the extremely urgent nature of the case, no time was afforded for refinements in diagnosis. The

important point was that the patient was subjected to sudden and profuse hæmorrhage, and if life was to be saved immediate operation was necessary. By this procedure the diagnosis was also cleared up at once. The hæmorrhage in this case seemed even more rapid than in most cases of extra-uterine pregnancy, and it was practically the character of the pulse that convinced one of the necessity for operative intervention.

II.—UNIQUE CASE OF “FLOATING KIDNEY,” IN WHICH NEPHRORHAPHY WAS SUCCESSFULLY PERFORMED: THE KIDNEY WAS WITHIN THE PERITONEAL CAVITY AND HAD A MESONEPHRON.

BY DR. DAVID NEWMAN.

Displacements of the kidney may be divided into three kinds—simple misplacements without mobility of the organ; “movable kidney,” where the kidney is perceptibly mobile behind the peritoneum; and “floating kidney,” where the peritoneum forms a mesonephron which attaches the kidney loosely to the spine. The terms “movable kidney” and “floating kidney,” as used by most writers, are synonymous. Morris, in his excellent work on *Surgical Diseases of the Kidney and Ureter* (p. 95), remarks:—“A ‘floating kidney’ is one which, whether it possesses a mesonephron or not, moves freely forwards—so as to rise or ‘float’ towards the anterior abdominal wall—as well as vertically and laterally; this ‘forward’ movement or ‘floating’ makes the distinction between it and the ‘movable kidney;’ it is not possible to distinguish until the abdomen is opened, or the kidney is exposed through the loin, whether a ‘floating kidney’ has a mesonephron or not.” And, again, at p. 97, he says:—“For convenience of description the terms ‘movable’ and ‘floating’ kidney will be used indiscriminately, except when one or the other type is specially referred to; it will then be designated by the term ‘movable behind the peritoneum,’ or ‘floating kidney without a mesonephron,’ or ‘floating kidney with a mesonephron,’ as the case may be.”

The distinction between “movable kidney” and “floating kidney” is clearly an anatomical one, clinically the two conditions cannot be distinguished, although it may be said that in all cases of “floating kidney” the mobility is great, still it must be admitted that in cases of “movable kidney,” that is to say, kidneys without a mesonephron, the mobility may be

equally extensive. It is to be regretted that a writer of Morris' distinction has chosen to perpetuate the confusion in the minds of the profession in this matter. In order to have a clear understanding of the pathology of the subject, as also for the sake of treatment, it is well to have an exact mode of expression and an accurate knowledge of the varieties of the malpositions which may be met with in practice. In cases of "movable kidney" the organ is mobile behind the peritoneum, either within its adipose capsule or in a sac formed behind the peritoneum and the muscular wall of the abdomen, whereas in cases of "floating kidney," the kidney moves about within the cavity of the peritoneum, and is attached by a mesentery to the spine.

In my book on *Surgical Diseases of the Kidney* (p. 72), I observed in regard to "floating kidney," "Objections may be raised to this division of the subject, seeing that, as a matter of custom, both the terms are used synonymously by most writers, and that clinically the diseases are not distinguishable from one another. It is only after the abdomen is opened that the presence or absence of a mesonephron can be demonstrated. It is necessary, however, from the surgical standpoint, particularly when operative interference is contemplated, carefully to separate the two conditions from one another. In "movable kidney," the organ can be exposed without opening the peritoneum, whereas in floating kidney it cannot. These varieties of displacement are recognised, not only by being distinct anatomically, but also by their etiology being different. Floating kidney is always a congenital condition, whereas movable kidney is usually acquired. The earlier writers on the subject looked upon elongation of the renal vessels as a proof of the affection not being acquired; they, however, did not distinguish between the two forms, but grouped all displacements of the kidney associated with mobility in one class.

It would, indeed, be difficult to explain how a mesonephron, properly so called, could be formed otherwise than congenitally, unless by supposing that the displaced kidney has pushed before it a fold of peritoneum, the surfaces of which have become adherent around it, and united to each other along the line of the renal vessels. That such a condition might arise as a result of localised peritonitis seems possible; there are, however, no cases recorded where there is any evidence of this having taken place. When inflammation has occurred in cases of movable kidney, it has in most instances led to an adhesion of the layers of the peritoneum, not only to the kidney and to

one another, but also to the surrounding parts, the result being that the kidney ceased to be movable, and became fixed in an abnormal position.

The point of importance to be attended to in connection with floating kidney is that it cannot be reached by an operation from behind without opening the peritoneum, and is therefore not so favourable for nephrorrhaphy as movable kidney. This should be borne in mind while operating. It is not possible, however, previous to the operation, to distinguish by physical examination the two conditions.

Some authorities have expressed the opinion that floating kidney is more freely movable than movable kidney, and use this as a basis for diagnosis. This is an error. In not a few cases of movable kidney the organ can be pushed with perfect freedom up under the ribs, down into the pelvis, and for a short distance across the middle line. What greater freedom of movement could be shown? It is true that in some instances of movable kidney the excursion may be limited to an up-and-down motion in a plane parallel to the lumbar muscles, as is seen when the sac in which the kidney moves is formed by the adipose capsule, without the capsule being detached from its seat behind the peritoneum. Where, however, the peritoneal covering has become raised from the posterior abdominal wall, less impediment is offered to movement, and so what was clearly at first a case of movable kidney gradually may assume the physical signs of the more mobile form, and may pass, according to some observers, from the class of movable kidneys into that of floating ones.

Fortunately, floating kidney is a very rare condition, but nevertheless it must not be entirely overlooked where an operation is contemplated for the cure of the more common variety of displacement with mobility."

As far as I can ascertain, the case about to be described is the first one in which nephrorrhaphy was performed for a mobile kidney with a mesonephron, and to this condition I would like to see the term "floating kidney" limited.

The patient, C. A., was advised to consult me by Dr. Palton Petrie, of Strathaven, and in his account of the case he informs me that "the patient is aged 37, single, housekeeper in her father's house. Her general condition of health was never quite satisfactory, and during the past three years she has been getting steadily worse, and within the last three months she became unfit to perform her household duties. There was considerable abdominal disturbance, characterised by a feeling

of distress rather than of pain, and at times considerable quantities of mucus were passed *per rectum*, evidently due to a subacute colitis. On examination of the abdomen there was distinct tenderness along the course of the transverse and descending colon, and Dr. Petrie, on palpating in the right renal region, found the kidney to be freely movable. The pulse was very feeble, and the patient suffered from great 'nervous prostration.' At this time Dr. Petrie kept her in bed for three or four months with considerable advantage, so that she was able to be removed to Dunblane, where she remained a fortnight. During her residence at the hydro-pathic establishment there, she was subjected to high-frequency electrical treatment with the view of improving the condition of the bowel, but owing to the mobility of the kidney the treatment was not pushed, and she returned home for the purpose of consulting me as to the question of operation.

"In her school days the patient suffered greatly from headache, the attacks sometimes being of two or three days' duration. They were always preceded by a very uncomfortable feeling about the waist, which passed up her back, and culminated in a severe headache. She was very fond of active exercise in childhood, but if this was indulged, it was certain to be followed by sudden and violent reaction, so as to make her feel completely exhausted, and the attacks of headache were certain to follow. When 16 years of age she had abdominal swelling of a few days' duration, at first at irregular, but afterwards at regular intervals. Shortly after this, on account of her mother's death, she, being the eldest daughter, had to undertake the household duties for the family, consisting of a father and six brothers. After eight years of this work, with occasional complete breakdown, her health became so much impaired that she was quite unfit for any kind of work, and on account of the pain in the right kidney she found it necessary to wear her corsets both night and day. She also suffered from sleeplessness. At this time she was ordered to remain in bed for three months, and with that treatment considerable improvement occurred. Since that time she enjoyed rather better health than previously, until within three years ago. She has always had to guard against the slightest over-exertion or sudden excitement."

When I saw the patient on 16th June, 1903, I found her pale, emaciated, and highly "neurotic." She complained of what she described as "abdominal distress," which really meant a sense of weight and dragging in the right loin, with

occasional attacks of severe sickening pain, which was induced by any exertion or sudden movement of the body. Digestion was very feeble, and appetite poor, but she informed me that she was now rather better than before she went to Dunblane. On examination of the abdomen, I found the right kidney freely movable, it could be pushed well beyond the middle line in front and down into the pelvis, and upwards under the ribs, but when it was once reduced to its normal position it remained there, and could not be readily disturbed unless the patient walked about for some time. Deep inspiration sometimes forced it downwards, and then it would suddenly shoot from the margin of the thorax towards the umbilicus. On palpation the whole organ could easily be caught up in the hand and its form traced. The kidney was unusually firm, a little smaller than normal, and the slightest pressure of the hand caused sickening pain. So long as it was not pushed under the costal margin it could be rolled from side to side freely, and very often suddenly slipped out of the hand in a downward direction. The percussion over the kidney gave a dull tympanitic sound, and in the loin, whether the kidney was replaced or not, there was a deficiency of resistance compared with the opposite side.

On 18th June, the ordinary incision was made through the parietes in the lumbar region, but the kidney could not be found in its normal position, and when pressed up to the depth of the wound by the hand it was found that in order to reach the organ the peritoneum required to be opened. On opening the peritoneum, a careful examination was made, when the kidney was found to have a distinct mesonephron, and showed the organ to be surrounded by peritoneum on all sides. An incision was made through the peritoneal layer covering the kidney, the fibrous capsule was split, and the kidney parenchyma brought into position at the edges of the parietal wound. There was no fatty capsule. Four sutures were inserted into the kidney, and the depth of the wound packed with iodoform gauze. The patient made an uninterrupted recovery, gained rapidly in strength, the appetite steadily increased, and she was dismissed from the Sandyford Home on 10th August.

Dr. Petrie, writing to me on the 1st October, says that "since the patient returned home she has gradually improved, is sleeping better than she has done for years, and the right kidney seems securely anchored. She is looking altogether healthier and plumper, and is able to take a short walk daily without discomfort."

III.—HODGKIN'S DISEASE (LYMPHADENOMA) OR LYMPHOSARCOMA? A CLINICAL STUDY OF A CASE.

BY DR. JOHN LINDSAY STEVEN.

Dr. Lindsay Steven's paper will be found as an original article in our issue for January, 1904, at p. 1.

IV.—HAMMER-FINGER, WITH NOTES OF SEVEN CASES OCCURRING IN ONE FAMILY.

BY DR. JAMES SCOTT.

Dr. Scott's paper appears as an original article in our issue for November, 1903, at p. 335.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1903-1904.

MEETING I.—28TH OCTOBER, 1903.

The President, DR. J. NIGEL STARK, in the Chair.

I.—SPECIMENS.

A. BY MR. R. H. PARRY.

1. Myomatous tumour of the ovary. The growth was exceptionally large and composed of myomatous tissue.

2. Tubercular salpingitis. The removal of the tube necessitated resection of two pieces of adherent intestine and part of the cæcum. The patient did well. Sections of the diseased tube were shown under the microscope.

B. BY DR. J. EDGAR.

1. Myoma of the ovary.

2. Tumour of the upper part of the rectum and sigmoid flexure.

3. Fibroid uterus complicated by carcinoma of the cervix.

These specimens were exhibited by Dr. A. W. Russell in the absence of Dr. Edgar.

C. BY DR. CHRISTIE.

Simple papilloma of the nipple, shown by Dr. Teacher, who referred to the rarity of such growths. The patient was 34 years old.

D. BY DR. J. K. KELLY.

1. Fœtus from an extra-uterine pregnancy. There were symptoms of an ordinary pregnancy, but at the end of the third month the patient had an attack of severe pain and sickness, which recurred after two weeks, and again six weeks later, when foetal movements ceased. The fœtus was partly macerated and the placenta degenerated.

2. Unruptured tubal pregnancy at fourth week. A minute embryo was found in the amniotic sac.

3. Sections of a primary carcinoma of the ovary, with secondary involvement of the tube and peritoneum.

II.—CHORIONEPITHELIOMA : LANTERN DEMONSTRATION.

BY DR. J. H. TEACHER.

Dr. Teacher gave a lantern demonstration of chorion-epithelioma and allied conditions.

A series of instruments, including modifications of the Bossi dilator, were exhibited.

MEETING II.—25TH NOVEMBER, 1903.

The President, DR. J. NIGEL STARK, in the Chair.

I.—SPECIMENS.

BY DR. J. M. MUNRO KERR.

1. A full-time pregnant uterus removed from a patient on whom he had twice performed Cæsarean section successfully. On the first occasion (in January, 1902) he had employed the fundal incision of Fritsch. During the second pregnancy there was no disturbance, but as the patient insisted on being

sterilised on the second occasion, he performed hysterectomy after extracting the child. The uterus was found extensively adherent to the anterior abdominal wall, but there were no unusual adhesions of the bowel to the fundus. The stump was treated intra-peritoneally. The patient was doing well, and both the children were alive and healthy.

2. Two ovarian cysts removed a week ago from a patient sent to him by Dr. Gardiner, of Coatbridge. The patient suffered from extremely severe attacks of abdominal pain. The cysts contained a large quantity of disorganised blood; the one being the size of an orange, the other of a hen's egg. The operation was of some difficulty, as the cysts were closely adherent to the surrounding structures.

II.—DISCUSSION ON ACCOUCHEMENT FORCÉ, WITH SPECIAL REFERENCE TO THE USE OF BOSSI'S DILATOR.

Dr. Robert Jardine opened the discussion by reading the following paper:—

In his recently published *Obstetrics*, Whitridge Williams says, in reference to accouchment forcé, "By this term is understood the forcible dilatation of the intact or partially dilated cervix, followed by version and extraction of the child." The first part of this definition is perfectly correct, but the latter part, although it is generally true, is not by any means universally so. A truer definition would be the forcible dilatation of the intact or partially dilated cervix, followed by artificial extraction of the child. In most cases the extraction would be done by version, but there is no reason why forceps should not be used or even craniotomy done. I have had to do both of these operations on different occasions, not of course on the same case.

Before considering the methods of performing the operation, let us glance briefly at some of the conditions under which it becomes necessary. Broadly speaking, we may say that it is almost entirely done in the interest of the mother, but in a few rare cases it may be done to save the child, as when the cord is prolapsed very early in labour, where the membranes rupture before labour begins and the pressure is telling upon the child, and also, in some cases, of sudden death of the mother, but in the latter case Cæsarean section would be preferable. In the interest of the mother the operation is perhaps most frequently done in eclampsia; but, speaking from personal experience, I should say it is called for most frequently in cases of ante-partum hæmorrhage. In pernicious

vomiting, heart disease, chorea, and insanity it may be necessary. In cases of complete occlusion of the os uteri I have performed it on five or six occasions. It may also be necessary in cases of badly contracted pelvis, where the membranes rupture at the beginning of labour, as in a case I dealt with quite recently. The cord was prolapsed and pulseless, projecting through an os which would only admit one finger. The true conjugate was only $2\frac{1}{4}$ inches, and therefore the head which presented could not act as a dilator. In such a case dilatation in the ordinary way could not be expected—we therefore did it forcibly.

Methods of performing the operation.—The only part of the operation which I shall deal specially with is the method of dilatation of the cervical canal. As a matter of fact, this is the crucial part of the operation, as the actual extraction of the child will be done in the same way as if the os had dilated naturally. If the cervix is not taken up, but retains its full length, it will be more difficult to dilate than when it is taken up and there is merely a thin rim at the external os. Therefore, as a rule, dilatation will be easier in cases which have reached full time, and especially if labour has commenced.

A soft cervix will dilate very easily, while a hard one may almost defy one's efforts. A multiparous cervix, unless it is one which has suffered from repeated inflammatory attacks, or contains much cicatricial tissue, is usually more easily dilated than a primiparous one.

The dilatation may be effected by forcible means or by incision. Force may be applied by means of the fingers or instruments. Dilatation by means of the fingers is probably the oldest method of all. In all the new American books on obstetrics a method is described as the method of Philander Harris. A finger is first introduced, and then a finger and thumb, then two fingers, and so on, until the whole hand is in. Dr. Harris may have been the first to describe and illustrate this method, but I am perfectly sure that the same manœuvres have been gone through by all obstetricians since manual dilatation began to be practised, and that wasn't yesterday. I know I used this very method the first time I dilated a cervix, and have continued to use it since. Sometimes two fingers of both hands may be used, or a thumb and finger of each hand. If the cervix is soft and yielding, full dilatation can be obtained in fifteen or twenty minutes. The strictest aseptic precautions must be observed, and when one hand becomes cramped the other should be substituted. If a hot

douche is allowed to play upon the cervix during the operation the dilatation will be assisted. The patient should, of course, be under chloroform, not only to save her pain and shock, but the relaxing effect of the chloroform upon the cervix is very marked. The lithotomy position is the most convenient, but one can do it quite well with the patient in the ordinary obstetric position. I might give many illustrative cases, but you are all quite familiar with the proceeding, so I need not waste time with any. Delivery can be done by version, forceps, or craniotomy, as may be necessary. As I have already intimated, version is the most usual method of delivery, but it is not always applicable.

Dilatation by means of instruments.—In some cases, if the cervix is very soft, hydrostatic bags may be used. Barnes' bags are rather too flexible, but Champetier de Ribes' may be used, as you can put traction upon it. This is a slower method, and where time is of great importance not very suitable.

Hegar's dilators are useful to commence the dilatation with when a finger cannot be introduced, but, of course, they are too small to be of much service. Expanding dilators are the most useful. There are several forms of these, but Bossi's, or a modification of it, is the one I shall speak of. I have had some experience of the ordinary four-pronged one, and also of the modified eight-pronged one (Frommer's). When the end pieces are removed from the four-pronged one the dilator is so small that it can easily be introduced into the cervix even if there is no dilatation to begin with. The prongs are slowly opened by the screw, until there is sufficient dilatation to allow of the introduction of the prongs with the end pieces on. The dilator is then closed and withdrawn, and reintroduced with the end pieces on. The dilatation must be carried on steadily and slowly, from twenty minutes to half an hour being taken to complete the operation. There is an index on the side of the instrument which shows the amount of dilatation. The eight-pronged one is used in exactly the same way, but it has no end pieces to slip on. If one uses the instrument slowly there is very little risk of tearing the cervix, but, of course, if it is screwed open quickly the cervix may be burst in several directions.

The first case in which I used the four-pronged dilator was an extremely interesting eclampsia one, which I saw in consultation with Dr. W. Mearns Taylor, of Skelmorlie. The patient was a primipara in the seventh month of pregnancy. As I shall probably report the eclamptic features of the case

at another time, I shall merely say that we deemed it advisable to empty the uterus at once. The cervix was its full length. I introduced the instrument without the end pieces first. In about twenty minutes the os was sufficiently dilated to allow of delivery by forceps. The cervix was not lacerated in the least. The patient made a good recovery.

In the following two cases I used the eight-pronged instrument. The first was an extremely interesting and puzzling case of tremendous distension of the uterus about the end of the fourth month of pregnancy. The uterus was much more distended than a full-time one, and I was inclined to the belief that it really was a case of cystic degeneration of the chorion of one twin with hydramnios in the other sac.

CASE I.—The case was one I saw in consultation with Dr. Wilson, in Irvine, and took into the Maternity Hospital on the following day. The tremendous distension of the uterus had occurred within three weeks. A full report of the case will be found in the *Scottish Medical Journal* for December. I determined to empty the uterus, but about three hours before the time set for the operation, contractions came on and the membranes ruptured. A gallon of liquor amnii was collected, but much more was lost. Severe bleeding came on. The os would admit a finger. I dilated the os to about half its size with the eight-pronged dilator, and delivered twins. The placenta was soft and degenerated, but not cystically, and there was a large amount of decidua in both horns of the uterus, which Dr. Mc'Bryde and I cleared out. The patient made a good recovery. The case was one of acute hydramnios. The cervix was not torn. I did not dilate the os fully in this case, as it was not necessary with such small fetuses.

CASE II.—This patient had a contracted pelvis, with a true conjugate of $2\frac{1}{4}$ inches. Dr. Patrick had recommended her to come for Cæsarean section, but she unfortunately did not come in until labour had been going on some time, and the cord had prolapsed through the os, which would admit only one finger. As there was no dilating bag, and the head could not act upon the cervix, I concluded to dilate artificially and do craniotomy. The eight-pronged dilator was used, and in about fifteen minutes the cervix was dilated as fully as the small pelvis would allow. We then did craniotomy, and a very difficult case it turned out to be. The cervix was quite intact after delivery. The patient did well.

The incision method.—I have done this operation

(Dührssen's) quite a number of times in eclamptics and in cases of complete occlusion of the os. I have usually made four incisions—one on either side, one in front, and one behind. After the incisions are made with a probe-pointed bistoury, dilatation is easily effected by means of the hand. In some cases I have stitched the cervix, and in others, where there was no bleeding, I have left it alone. The after-results have been quite as good where stitches were not used. As a matter of fact, in none of the cases could you tell any difference from an ordinary multiparous os. I need not give details of any of these cases, as I have already reported most of them.

Another method of incision is by doing a vaginal Cæsarean section. I have not practised this, but as Dr. Kerr has, no doubt he will have something to say about it. The incision method, I am convinced, causes less shock than forcible dilatation by the hand or instruments, unless the cervix is very soft. It is a much more rapid method, but one must, of course, be prepared to deal with bleeding, if it should occur.

In conclusion, I would like to say that I consider Bossi's dilator a most useful instrument in suitable cases. In an extremely rigid cervix I would give preference to the incision method, as it saves shock, and is therefore preferable, say, in a bad case of eclampsia. I have had no experience of the instrument in cases of placenta prævia, but it has been used with success. In the treatment of accidental hæmorrhage I think it will prove most useful, and I intend to give it a fair trial.

Dr. Munro Kerr continued the introduction of the discussion by reading the paper which appears as an original article at p. 169.

Dr. W. L. Reid said he had no experience of Bossi's dilator, nor had he seen it used. For dilating the cervix he had employed the hand, aided, when necessary, by incisions. He had met with few cases where manual dilatation had failed, but advised a very careful use of the hand. His usual method had been to dilate just sufficiently to admit the forceps and allow of traction. He had used the probe-pointed bistoury in difficult cases, making an incision on each side in the direction of the postero-lateral fornices. This operation had done well even in the days when antiseptics was not carefully carried

out. The incision healed quite well without stitching, provided the parts had not been previously bruised.

Dr. Armstrong (Kirkintilloch) stated he had had one year's experience of Bossi's dilator, and found it of great service. In a primipara, aged 18, suffering from eclampsia, dilatation took three-quarters of an hour, and he got a living child with forceps, the soft parts not being lacerated. In a case of placenta prævia he dilated sufficiently to permit of version. He had had no difficulty in dilating a seven months' pregnancy with little tearing. He recommended that plenty time should be taken, and that every now and then the instrument should be slackened and moved round.

Dr. A. MacLennan said that Bossi's dilator was not liable to cause tears, but that the use of the forceps for pulling down the head often tore the cervix badly. He had done a modified vaginal Cæsarean section upon a primipara at full time for a rigid cervix. The suturing of the anterior incision with continuous catgut had been done without difficulty, the cervix being pulled down with volsella fixed on each side. There was one drawback to cutting the cervix before it was dilated, as it thus left a narrow canal, rendering the uterus liable to be dilated by blood-clot.

Dr. A. W. Russell referred to two of his cases, and had found that laceration had occurred.

Dr. Scott Macgregor drew attention to the effect of the points of the instrument, and remarked that dilatation ought to be slow, as the stretching of the tissues tended to make the cervix contract spasmodically.

Dr. Gairdner gave his experience, and thought that the general practitioner would prefer using Bossi's dilator to performing vaginal Cæsarean section. Dilatation should be done slowly, and the cervix examined from time to time to guard against undue tearing.

Dr. Nigel Stark considered there was a danger of midwifery becoming too meddlesome. In certain cases, however, the use of a dilator was necessary, and, failing that, incision.

Dr. Jardine and *Dr. Kerr* replied.

MEETING III.—16TH DECEMBER, 1903.

The President, DR. J. NIGEL STARK, in the Chair.

I.—SPECIMENS.

A. BY DR. CARSTAIRS DOUGLAS.

1. Kidneys showing parenchymatous nephritis from an alcoholic multipara, the subject of eclampsia.
2. Kidneys from a primipara, aged 17, who died from eclampsia.

B. BY DR. R. JARDINE.

1. Ruptured uterus removed by supravaginal hysterectomy. The child lay in the transverse, and was delivered after decapitation. There was an extensive tear laterally, and a smaller rupture posteriorly. Placenta, blood, and meconium had passed into the abdominal cavity.
2. Jardine's modification of Braun's decapitating hook. The hook is somewhat wider, and provided with a cutting edge.

C. BY DR. J. K. KELLY.

1. Large soft myoma of uterus.
2. Dermoid of left ovary.
3. Myomatous uterus, with ovarian cyst, right side, removed by hysterectomy.

D. BY DR. G. BALFOUR MARSHALL.

Uterus, tubes, and ovaries removed by panhysterectomy for carcinoma of corpus uteri.—Miss M., aged 52, was sent to me on 19th November, 1903. Her menstrual type was twenty-eight-day, lasting five days, and moderate in quantity till two years ago, when the flow began to get scantier. In the middle of September her present illness first showed itself as metrorrhagia, accompanied by bearing-down pain, sacralgia, and pain in the hypogastrium. There had been a slight daily loss of blood for two months, but hæmorrhage had ceased four days before I saw her. Examination gave the following:—Hymen intact, admitting one finger; cervix healthy, lying in

vaginal axis; uterus retroverted, second degree, enlarged, with a small subserous fibroid on anterior wall; sound passed 3 inches, showed roughness of mucosa, and caused bleeding.

As the case was suspicious of malignancy a diagnostic curetting was advised. The uterus was dilated and thoroughly curetted on 25th November. An examination of the scrapings indicated undoubted carcinoma, as the sections placed under the microscope show.

On 2nd December I removed *per abdomen* the entire uterus, tubes, and ovaries, with as much of the broad ligament as possible. The peritoneum was sutured across the pelvic floor so as to bury all the stumps which had been ligated with catgut. The patient has made an uninterrupted recovery.

E. BY DR. ALEX. MACLENNAN.

Section of endometrium curetted from a virgin patient who had suffered for ten years from menorrhagia and metrorrhagia. The condition showed endometritis glandularis hypertrophica.

F. BY DR. J. EDGAR.

Dermoid of right ovary (shown by Dr. A. W. Russell) removed by posterior colpotomy from a patient, aged 25, and six months' pregnant.

G. BY DR. H. Y. TAYLOR.

A seven months' foetus, with left half of diaphragm absent and hernia of abdominal viscera into left side of thorax, the heart being pushed over to right side.

This case is to be fully reported on at a future meeting.

(The report of this Meeting will be continued in our next issue.)

GLASGOW SOUTHERN MEDICAL SOCIETY.

On 18th February Sir J. Halliday Croom, M.D., F.R.C.P., delivered his address as Honorary President of the Society, in the Faculty Hall, 242 St. Vincent Street. Dr. Thomas Richmond occupied the chair.

Taking as his subject "Moot Points in Cancer," the lecturer surveyed the present position of science in its investigations

into the causation of the disease, and expressed his belief that the true etiology of the trouble would remain obscure. Touching on the part heredity played in the origin of cancer, Sir Halliday was inclined to ignore it, and deemed the few cases which appeared to show the active influence of heredity as purely accidental.

On the motion of Professor M'Call Anderson, seconded by Professor Murdoch Cameron, the thanks of the large assembly were accorded Sir Halliday Croom for his address.

GLASGOW NORTHERN MEDICAL SOCIETY.

THE Society met on 21st January, when Professor Sir William Macewen delivered an address, at the request of the Society, on "Appendicitis," dealing chiefly with its pathology, symptoms, and treatment prior to operation. The lecture was illustrated by numerous diagrams, sketches, photographs, and specimens. A hearty vote of thanks to the lecturer terminated the proceedings.

REVIEWS.

The Refraction of the Eye. By GUSTAVUS HARTRIDGE, F.R.C.S.
Twelfth Edition. London: J. & A. Churchill. 1903.

THE facts that this volume is in its twelfth edition, and that nearly twenty thousand copies have been printed, incontestably prove that it meets a "felt want." We have read it carefully over, and are of opinion that it is well suited to the requirements of junior students and of those beginning the ordinary practice of a modern ophthalmological clinic. While saying this in the most cordial manner, we regret to find in the book many errors which we cannot but regard as serious. To begin with, on page 24, after the definition of the first principal focal point, we are told, "a vertical line passing through this point is called the *first principal plane*." We suppose that the author really means first focal plane. Apart from the fact that the first focal plane is only vertical for one condition of the optic axis, namely, when it is horizontal, it is

to be observed that a line is not a plane. A right line may be said to be in a certain plane, but no single line can define a plane.

The formula given on page 38 for the range of accommodation in emmetropia is unfortunate; it is $A = P - \infty$. Now, if P be a finite quantity, the right hand side of the equation is equal to minus infinity (whatever that may be) and is not equal to P . The original formula for the range of accommodation was less likely to lead to confusion. It was generally stated $\frac{1}{A} = \frac{1}{P} - \frac{1}{R}$. Now, when R in the limit is infinite,

then $\frac{1}{R} = 0$. On page 42 we are told "that to test the power of convergence, prisms are held with their bases outwards." The base of a prism is an absolutely undefined thing. It may or may not be parallel to the refracting angle of the prism; it may be curved or straight. The important thing about a prism is its refracting angle, and instead of saying "bases outwards," the author should have said "refracting angles inwards." By the way, it would have been well to have said that the prisms are to be held before the eyes.

On page 45 we are told "the *punctum remotum* of convergence is seldom situated at a finite distance; sometimes it is exactly at infinity, but in the majority of cases it is situated beyond infinity, i.e., the visual lines diverge slightly." We wonder how far away a point must be before it is "beyond infinity."

Nor can we allow the paragraph on the same page beginning with the sentence, "Prisms are numbered in degrees according to the angle of the prism," to pass without protest. Did we adopt the same method of enumerating prisms that Mr. Hartridge does, we would probably have written the sentence somewhat as follows:—Prisms are marked according to the number of degrees in their refracting angles. Our objections to the paragraph are, however, more serious. We are told that "The deviation produced by a prism is equal to half its angle." Mr. Hartridge does not define what he means by the deviation of a prism, we presume that he refers to the angle of minimum deviation. Now, this angle is never half of the apex angle of the prism, for the obvious reason that the index of refraction of the glass of which a prism is made never is 1.5. Further, the method of marking prisms by apex angles is obsolete. All good prisms are now marked in their angles of minimum deviation, expressed either sexagesimally or in centradians or in prism dioptres.

The diagram on page 86 should be corrected in the next edition or an explanatory note inserted. The virtual image formed behind a plane mirror is represented as being only about a fourth of the distance behind the mirror that the object is in front of it.

While perusing the volume we have observed a good many peculiarities of style which we do not like. Thus, on page 61, we find, "it is perhaps better for the student not to waste time." We should like to ask the author under what circumstances is it good for him to do so? Again, on page 76, we are told that rays issue from a certain form of eye "in a divergent direction."

As stated at the beginning of this review, notwithstanding these blemishes, elementary students will find in this book much that is useful, and those who are in the habit of reading books uncritically may read this one, not only with profit, but with pleasure. Judging from the fact that nearly twenty thousand copies of this book have been printed, such readers would seem to form the large majority.

Squint: Its Causes, Pathology, and Treatment By CLAUD WORTH, F.R.C.S. London: John Bale, Sons & Danielsson, Limited. 1903.

THIS is a notable book. It is an elaborate addition to the literature of the subject, and we say at once it is a credit to the ophthalmological school of London. Mr. Worth has thrown a great deal of light on certain obscure points about which previous writers on squint have given little information, and we cannot but think that his book must be a standard one for a considerable time to come. The explanation of a convergent concomitant squint is, he urges, the want of development of the fusion faculty, and his whole argument is based upon this supposition. It is a theory which amply accounts for most of the facts connected with convergent squint, and seems to us more to meet the requirements of the case than any of the other theories. One thing he insists upon is the early treatment of every case, for his observations proved that when a young child is allowed to squint, it very rapidly loses the power of central fixation. The treatment which he advocates is very largely educative, operative treatment holding only a secondary place.

It is to be hoped that the days are for ever gone when it

was thought sufficient simply to perform the old, and we trust obsolete, operation of tenotomy.

It is unnecessary in a general medical journal to enter fully into the details of Mr. Worth's book, but we say without hesitation that it is one which should be read by all ophthalmic surgeons.

Ankylostomiasis: Its Cause, Treatment, and Prevention.

London: The Colliery Guardian Co., Limited. 1903.

THIS pamphlet is issued as a supplement to the *Colliery Guardian* for 6th November last, and though issued anonymously, it is obviously the work either of a medical man or of one who knows a good deal about medical science. The essay begins with the anatomy of the ankylostoma, or ankylostomum, as it is now sometimes called, and gives illustrations of the worm in different stages of its development. The clinical phenomena and the treatment of the disease are also considered, and an account is given of measures employed in various places to prevent its spread. Information is given as to the history and present prevalence of ankylostomiasis in European mining centres in Austria, Germany, Belgium, and France; and this, like the earlier portion of the work, is amply illustrated. We can cordially recommend this essay to our readers.

A Thesaurus of Medical Words and Phrases. By WILFRED M. BARTON, M.D., and WALTER A. WELLS, M.D. London: W. B. Saunders & Co. 1903.

THIS *Thesaurus* is, broadly speaking, the converse of a medical dictionary. Instead of consulting it to ascertain the idea involved in a certain term, one turns to its pages to find the term by which to express a given idea. Those who wish the technical word for a vernacular medical expression, and those who wish a purely technical word to substitute for a more familiar or generally understood medical expression, may refer to this book for what they want.

This, however, gives but a partial idea of its value. Those who desire synonyms for particular words, with a view, for instance, to avoiding repetition in writing, should turn to the *Thesaurus*. Many technical adjectives are arranged under particular headings, such as "shaped" and "resembling," and

numerous technical nouns, as well as adjectives, are ranged under such headings as blood, nose, drug, &c.

The general arrangement of the *Thesaurus* is alphabetical, and the free use of cross references adds much to its value. Other professions, besides that of medicine, may be expected to recognise the importance of a good work of this kind.

Progressive Medicine: A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., assisted by H. R. M. LANDIS, M.D. Volume I. London: Rebman, Limited. 1903.

THE first volume for 1903 of this admirable publication well maintains the high level and usefulness of its predecessors.

Charles H. Frazier, M.D., writes on the recent contributions to "The Surgery of the Head, Neck, and Chest." Of special interest, we may mention Crile's method of temporarily closing the common carotid arteries in extensive operations on the head and neck, the results of sympathectomy in exophthalmic goitre, the results of closure of heart wounds and suture of arteries, and the discussion as to the advisability of massage of the heart in chloroform syncope. The results obtained by surgical interference in pulmonary tuberculosis are reviewed, and we are pleased to see that the bulk of opinion is against pneumectomy and pneumotomy. James B. Herrick, M.D., gives an epitome of recent contributions to the literature of "The Infectious Diseases," including diphtheria, dysentery, the fourth disease, malaria, black-water fever, pneumonia, acute rheumatism, tetanus, and typhoid fever. Since the consensus of opinion of all who write is that early operation is the treatment for typhoid perforation, and since the number of successful operations is constantly becoming larger, the notes by Osler and others on the early diagnosis of this accident are specially valuable. "Diseases of Children," by Floyd M. Crandall, M.D., includes references to hæmorrhages, ophthalmia neonatorum, congenital stridor, congenital malformations, premature infants, blood counts in the newborn, hygiene, infant-feeding, diseases of the alimentary and respiratory tracts, diseases of the circulatory, urinary, and nervous systems, diseases of the blood and ductless glands, and diseases of faulty nutrition. Ludvig Hektoen, M.D., writes on cytotoxins, agglutinins, and precipitins, and he reviews the recent work in the realms of

bacteriology and general pathological histology; tumours and cancer parasites come in for consideration, likewise the action of x-rays and anticancer serums on carcinomata, and a section is devoted to chorio-epithelial formations in teratoma of the testicle. A. Logan Turner, M.D., discusses the recent attainments in "Laryngology and Rhinology," and Robert L. Randolph, M.D., reviews the recent work in the department of "Otology." The volume is concluded with a capital index, which still further enhances its value.

To any and every practitioner of medicine and surgery who desires to keep abreast of the times, and who, yet, has neither the leisure nor the opportunity to consult first-hand the plethoric mass of periodical literature (home and foreign), we confidently recommend this work. Of all that has been written about during the past year or so, everything that is worth knowing will be found here.

Modern Materia Medica and Therapeutics. By A. A. STEVENS, A.M., M.D. Third Edition. Entirely Rewritten. London: W. B. Saunders & Co. 1903.

SINCE the publication of the first edition of this work the subject of materia medica and therapeutics has made such rapid progress that the author in this new edition has practically felt compelled to rewrite the most of it.

In doing so, he has taken the opportunity of rearranging his material. The work, as before, is divided into two main parts—(1) *Materia medica*, and (2) applied therapeutics. In the first section of previous editions the drugs were arranged alphabetically, whereas in the present edition they are arranged in pharmacological groups. This is a distinct advantage to the student, though, as the author admits, in the present unsettled state of pharmacology, the classification must necessarily be very imperfect. Under each drug there is a good concise statement of the pharmacological action and therapeutic uses, but the arrangement above referred to necessitates the discussion of a drug in several groups. Thus, cocaine is fully described under "Cerebral Excitants," but appears in another part of the book under "Local Anæsthetics," and again among "Mydriatics." This, however, can scarcely be avoided. What must militate very much against the use of the book in this country is the fact that the preparations given are all those of the *United States Pharmacopœia*. Certainly one way of extending the usefulness of the

book would have been to have included the *British Pharmacopæia* preparations as well. The second section of the book—Applied Therapeutics—is confined within 135 pages, while the first extends to about 500. This part is by no means exhaustive; for example, Syphilis does not appear in it at all, though this is briefly referred to under Mercury and Iodide of Potassium. Nevertheless, it is sufficient to lay down in broad lines the treatment of many types of disease. It forms, therefore, an excellent supplement to the first part of the work. A very good index makes reference to various drugs and diseases a matter of great ease.

The Natural and Artificial Methods of Feeding Infants and Young Children. By EDMUND CAUTLEY, M.D. Second Edition. London: J. & A. Churchill. 1903.

THIS manual is one of the best on the subject of infant feeding which is at present available, and the appearance of a second edition is evidence in itself of the manner in which it has been received and appreciated by the profession. Since the publication of the first edition many changes have taken place in the views as to what are the best methods of feeding infants. The Americans have continued to elaborate their system of percentage feeding, and to such an extent that it scarcely appeals at all to the general practitioner, who will always have the care of most of the infants requiring medical attention; nor does the system always prove successful.

This whole part of the subject is discussed with care, and a proper value assigned to the various methods. Considerable attention is also given to the pasteurising and sterilising of milk, and to advantages and disadvantages connected therewith, especially as to the effect on the nutritive value of the milk.

Some modification of the views expressed in the first edition have also been adopted in this connection, but the opinion expressed is that until some system is devised which will ensure the milk supply being free from tubercle bacilli and other infective organisms, we are compelled to counteract the danger by sterilisation.

The question of the transmission of tuberculosis by infected milk is considered in much detail, and though, in the main, agreement is expressed with the views of Professor Koch, it is still regarded as by no means definitely settled. On the whole, as the author states, we must take a guarded view at present. The human tubercle bacillus is very widely

distributed, and probably most cases of tuberculosis in children are due to infection through the respiratory tract. Possibly we have two kinds of tuberculous infection in man, as some chronic forms of tuberculosis in children resemble in their effects, more especially in the spleen, the tuberculosis of guinea-pigs due to inoculation with the bovine bacillus.

The alimentary tract is insusceptible to infection by either kind of bacillus. Hence the risk of infection from tuberculous milk is a comparatively slight one, but at present we are not justified in regarding it as a wholly negligible quantity. Certainly all milk from a cow with tuberculous disease of the udder must be destroyed. It is also safer not to use the milk of a tuberculous cow even when no udder disease can be found. The use of tuberculin is a valuable means of detecting latent or active tuberculous disease. It is evident from these extracts that the author, though leaning to the view that there is little risk in the transmission of tuberculosis from the cow to man by means of the milk, yet does not recommend that any of the plans adopted to prevent it should be relinquished. There is no doubt about the safety of this course as the matter stands at present.

The Care of Infants: A Manual for Mothers and Nurses.
By SOPHIA JEX-BLAKE, M.D. Second Edition. Edinburgh:
George A. Morton. 1903.

SOME useful information for nurses and mothers is to be found in this little manual. It is, however, on the whole rather disappointing and out of date, the chapter on "food" being specially so.

The Mycology of the Mouth: A Text-Book of Oral Bacteria.
By KENNETH WELDON GOADBY, D.P.H. Camb., L.R.C.P.
London: Longmans, Green & Co. 1903.

THIS work, which is mainly written for students, deals with the micro-organisms of the mouth. As not only bacteria, but higher orders, such as schizomycetes, must be included, the author prefers the title of Mycology instead of Bacteriology. He very wisely limits his investigations in such a work to the forms most frequently found in the oral cavity, because, as he points out, a large proportion of the micro-organisms of the

fifteen hundred already described are found in this cavity at one time or another.

Any student desiring a practical text-book dealing with the micro-organisms found in this situation will find this work a good guide. Dr. Goadby is not contented with the question from the special standpoint. A good part of the work is taken up with the ordinary principles and practice of bacteriology, sterilisation, microscopical methods, and cultivation.

After an excellent introduction, he deals more particularly with the pathogenic forms of interest to the medical man and dentist. A special chapter is devoted to those bacteria which are only known to occur in the mouth, and another to saprophytic forms not included in the classes we have referred to.

The student will find this work of great help to him; and those who desire to pursue the study of bacteriology, with special reference to micro-organisms which have a bearing upon the pathology of medical and dental affections, will be amply repaid by a careful perusal of the work. The book is well arranged, the author expresses himself clearly, and the illustrations are good and numerous. Dr. Goadby is to be congratulated upon the production of his work, which deserves every success, and while it is mainly intended for students, many practitioners will welcome and value it.

A System of Physiologic Therapeutics: A Practical Exposition of the Methods, other than Drug-giving, Useful for the Prevention of Disease and in the Treatment of the Sick.
Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VIII:
Rest, Mental Therapeutics, Suggestion. By FRANCIS X.
DERCUM, M.D., Ph.D. London: Rebman, Limited. 1903.

THIS volume contains much that may be read with interest by any physician, but while both interesting and instructive, it scarcely strikes us as being so encyclopædic in its character as one or two of the earlier volumes. This is perhaps owing to the nature of the subject treated.

The division of the work into three parts is indicated in the title.

Part I, on rest, consists of six chapters, treating respectively of the phenomena of functional activity, of the fatigue neurosis, of rest in neurasthenia, of hysteria, of hypochondriasis, and of rest in chorea and other functional nervous diseases and in organic nervous disease.

In Part II, on the therapeutics of mental disease, there are two chapters, one on prevention and on general principles of treatment, the other on special treatment.

Part III is on suggestion, and contains one chapter on normal suggestion, and another on suggestion by religious and mystic methods, hypnotism, faith-cures, &c.

In this, as in an earlier volume of the series, treatment by drugs receives consideration, notwithstanding what is implied in the general title. The reader, however, need not complain, and will perhaps rather be gratified when he finds such useful agents discussed in the appropriate place.

On Syphonage and Hydraulic Pressure in the Large Intestine. By RALPH WINNINGTON LEFTWICH, M.D. London: J. & A. Churchill. 1903.

WE have read with much interest this *brochure*, and strongly advise all who concern themselves with intestinal mechanics to make an acquaintance with Dr. Leftwich's views, though we ourselves cannot see our way to subscribe to them. According to this author, peristalsis may exist in the great intestine, but is of no great consequence, the important factors being hydraulic pressure and syphonage. That the contents of the large intestine are principally moved on by syphon action is, no doubt, a most fascinating proposition. With glass tubes Leftwich has shown that matters of the consistence of *fæces* can be syphoned, but whether syphonage in the large intestine is possible depends on whether or not a certain degree of rigidity of the intestinal walls exists, and this, the crux of the matter, is supported by nothing but plausibilities—inductive reasoning. To seek confirmation for such a view, viz., that the longitudinal muscle fibres of the colon are in a state of tonic contraction in the continuous retraction of the anus seems to us somewhat unfortunate, since the tonus of the levatores ani and coccygei sufficiently explains this phenomenon. Besides, Leftwich himself frankly admits that the sigmoid flexure is not the rigid structure he imagines the colon to be, and how without such a *point d'appui* could contraction of the longitudinal muscle fibres of the rectum raise the anus? Further, since the existence of hydraulic action in the bowel involves the necessity for some considerable rigidity in the walls of the colon, we cannot regard this force as really proved to exist. We need not conclude that the ileo-cæcal valve has been inserted for hydraulic effect, and the antiperistaltic

movements in the cæcum, ascending and transverse colons—demonstrated by Cannon—give a much better reason for the presence of a valvular structure at the entrance of the small intestine into the large.

Descriptive Catalogue of the Anatomical and Pathological Specimens in the Museum of the Royal College of Surgeons, Edinburgh. Vol. III. By THEODORE SHENNAN, F.R.C.S.E., Conservator. Edinburgh: Oliver & Boyd. 1903.

THIS volume completes the description of the pathological specimens in the museum, and as far as possible keeps to the method of classification used in the two preceding volumes. The series herein dealt with are Organs of Generation, Mammary, Heart and Blood-vessels, Respiratory System, Liver and Gall-bladder, Spleen, Glands (lymphatic and ductless), and Animal Parasites.

The descriptions are concise, but good, and the printer has done his part so as to make reference a work of ease. Mr. Shennan deserves great credit for the production of the volume.

Pathologische Anatomie und Krebsforschung: Ein Wort zur Verständigung. (*Pathological Anatomy and Cancer Research: a Word of Explanation.*) By PROFESSOR DR. O. LUBARSCH. Wiesbaden: J. F. Bergmann. 1902.

LUBARSCH has the conviction that the tendency of modern cancer research is to seriously divorce the pathological anatomist and physiologist from the practising physician and surgeon. "The representatives of research in these different directions speak different languages, and can no longer understand one another." To amend such a state of matters this pamphlet is written, and it is addressed to the widest medical circle rather than to the specialised investigator.

Lubarsch sets out to prove three theses—"1. So far it has not been demonstrated that any micro-organism at all is a specific producer of cancer or of any other new formation. 2. So far there has been no success in bringing forward any analogies from the realm of plant and animal diseases to prove the parasitic formation of destructive new-growths. 3. Neither the results of statistics, nor epidemiological, experimental, and clinical facts lead us to accept the theory of an infection."

Much evidence is adduced in support of these contentions, and the findings of Lubarsch's critical review are given as follows:—"1. Between all kinds of true neoplasms and the destructive new-growths there exist so many affinities and transitions that the only logical way would be to accept for all a parasitic origin, were we able to regard as true such an origin even for one kind. 2. We know as yet of no parasites which are capable of producing true neoplasms. 3. There are many real neoplasms which differ from the carcinomata both histologically and genetically, but which, nevertheless, share with them the property of destructive growth, of metastasis, and of producing a cachexia, and yet with these a parasitic origin must be regarded as unlikely. 4. Also amongst the individual destructive epitheliomata (carcinomata) there are whole groups whose destructive characters are very difficult to reconcile with the idea of a parasitic origin. 5. Since we have no evidence as regards the causation of cancer that is free from objection, we must, at the very least, ascribe to other factors, as chronic irritation and extant embryonic or post-embryonic displaced cells, as great an etiological significance as to parasites."

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MATERIA MEDICA AND THERAPEUTICS.

By JOHN WAINMAN FINDLAY, M.D.

The Treatment of Enteric Fever.—The January number of the *Practitioner* is composed of a series of articles on enteric fever, those on treatment being by Sir John W. Moore, Herbert P. Hawkins, Hector Mackenzie, and Thomas Macrae, while A. E. Wright contributes the section on antityphoid inoculation.

It must now be taken as proved that Professor Wright's inoculations establish immunity against enteric infection; but their only partial success when performed on a large number of individuals makes one wonder whether the technique may not be, as yet, somewhat faulty.

Succeeding an inoculation a negative phase is always established, during which the individual is more susceptible to the infection than before; but it is transient, and is succeeded by a positive wave, in which the blood is flooded with newly-formed antitropic substances, and becomes immensely more resistant to the infection. This increased resistance, however, is not maintained at its maximum for long, though a high tide of diminished susceptibility persists for a considerable period.

The intensity of the negative phase and its duration are directly dependent on the dose of vaccine. With very small doses the positive phase may become established within twenty-four hours, while large doses may be followed by a negative phase of a fortnight's (or longer) duration.

A second inoculation produces a cumulative effect. But this may take place in either direction; the resistance, if the positive phase is present, becoming greatly increased, but, on the other hand, being still further lessened if the negative phase is still in existence.

English physicians are generally agreed that milk, or, at anyrate, a fluid dietary, is necessary for enteric patients, both during the pyrexial period and for some time afterwards. Milk, however, is sometimes imperfectly digested, and, as it forms a good culture medium for the bacterial flora of the intestine, is not seldom responsible for an increase in intestinal catarrh, so that its amount must be diminished or some modification of it adopted.

The usual three pints, too, generally as much as any fever patient can digest, scarcely furnish the requisite number of calories of energy per diem; and this failure is now generally recognised, and albumen water, or maltine or glucose (as proteid-sparers) are used to replace some or all of the milk. In Osler's wards, diarrhoea, distension of the abdomen, or the presence of curd in the stools, are recognised as indications in this direction, and increased quantities of egg-albumen and whey take its place. Beef-tea, peptonoids, &c., are *never* given by him.

Macrae and Moore advocate the copious administration of water; in the Johns Hopkins Hospital six or seven litres of water are, if possible, given in the twenty-four hours.

All these writers condemn the use of antipyretic drugs, though Moore sometimes gives quinine in the late remittent pyrexia. All use water freely as an antipyretic, though Osler alone habitually pursues Hare's practice, the others using tepid or cold sponging, or compresses or packs.

The danger of diarrhoea is generally pointed out, and Moore emphasises the importance of not purging the patient at the onset of the disease. Intestinal antiseptics, lately so lauded, seem now less fashionable, though Moore gives turpentine and salicylate of quinine or bismuth, and Hawkins carbolic acid, in certain cases. Osler never uses any of these drugs.

In cases of hæmorrhage, absolute rest, perhaps secured by morphia hypodermically, and cessation of all mouth-feeding, are by Osler combined with the administration of calcium chloride and light ice-compresses to the abdomen. Hawkins and Moore give opium freely. Cardiac failure is met by saline injections, and stimulants may be required, though their administration is postponed as long as possible.—J. M. C.

The Effects of the Ingestion of Salt upon the Organism. (*Bull. d. la Soc. Méd. des Hôp. de Paris*, 1903, pp. 1165, 1203, 1220, 1257, 1267, 1450).—Many members have continued their investigations and reported their results.

In cases of *cardiac failure*, the administration of sodium chloride (10 grammes per diem) is usually followed by its retention and an increase of œdema; but this is not always so, as sometimes the salt is fully excreted even though œdema is present, and in such cases no evil results.

The converse is not so absolute; a salt-free dietary is not at all invariably succeeded by improvement, as the output, even when the intake is nil, may be scanty, and the saturation of the fluids of the body remain at their maximum. In the typical case of cardiac failure the urinary and chloride excretion is defective, and on improvement excessive (hyperchloruria of retention), but in some instances hypochloruria persists, and is then, if permanent while the patient is on ordinary diet, of great significance. A salt-free dietary, however, usually checks the increase of œdema, even though no diminution occurs.

In *ascites of hepatic origin* a salt-free dietary is often of service, as, whatever

the cause may be, its free administration is generally accompanied by an increase in the effusion. In such cases the quantity of salt in the fluid may be very considerable, though its retention is probably not the result of renal impermeability.

Salt may irritate the *kidneys* during its excretion. Vaquez and Laubry found that a salted diet increased the albuminuria in a case of cardiac failure from mitral regurgitation, and they suggest that the bad effects of ordinary "bouillon" in cases of arterio-sclerosis may be due to the large quantity of salt which it contains.—J. M. C.

The Influence of Alcohol on the Course of the Infectious Diseases.—Cabot (*Boston Med. Journ.*, 23rd July, 1903), in 41 cases—mainly cases of enteric fever—has made 1,105 measurements of the arterial pressure before, during, and after the administration of a therapeutic dose of alcohol. Neither when the pressure was low nor when it was high did he observe any change which could be attributed to the alcohol. The action of the alcohol was nil, or too slight to be appreciated by the instruments at our command. Similarly, the alcohol did not seem to have any effect on the temperature, pulse, respiration, appetite, sleep, delirium, and secretions (renal and cutaneous) in 300 patients affected with different diseases. Cabot, however, considers alcohol of great importance as a narcotic and vaso-dilator.

H. A. Hare (*Therapeutic Gazette*, 15th May, 1903) publishes the results of some experiments he carried out to determine whether alcohol does good in infectious diseases by increasing the bacteriolytic power of the blood. The bacillus coli and the typhoid bacillus were the organisms employed, and the effect of serum, obtained from patients after varying doses of alcohol had been administered, in checking the growth of these organisms was observed.

Hare summarises as follows:—“(1) The conclusion to be reached from this research is that the use of alcohol seems to have the power of combating infectious diseases by increasing the bacteria-destroying power of the blood. (2) While the experiments so far made are too few and too contradictory to determine this question, they indicate, so far as they have gone, that this effect is produced, to some extent at least, by an increase in complement.”

These conclusions of Hare cannot be allowed to pass without drawing attention to some of the facts mentioned by Gruber (*Bericht über den VIII internationalen Congress gegen den Alkoholismus*, 1902, SS. 80-85) in reviewing this question. Koch and Doyen found, long ago, that, by administering a single large dose of alcohol, they were able to infect, with cholera, animals which were but little susceptible to this disease. Thomas, too, has more lately shown that profoundly intoxicated rabbits are killed by one-sixth of the dose of a cholera culture required to kill normal animals.

In a similar manner, Nocard and Roux have, by giving alcohol, been able to carry out successful inoculations with attenuated quarter-evil bacilli, and *Plautia* succeeded in making dogs susceptible to anthrax. Abbot found intoxicated rabbits more susceptible than normal ones to infection with pus bacteria. Valagussa and Raneletti, through the long-continued use of alcohol, diminished the resistance of rabbits to the diphtheria bacillus. Wurtz and Hudelo (1895) have firmly established that in intoxicated rabbits the bacteria, which normally inhabit the intestine, can penetrate the intestinal walls, and so give rise to peritonitis and other diseases.

Very interesting, also, are the findings of Deléarde (1897), that the intoxication of animals by means of alcohol makes it impossible to render them immune to hydrophobia and anthrax, and very difficult to immunise them to tetanus. Laitinen administered alcohol by the mouth, for long periods and in large doses, to dogs, pigeons, and hens, and then inoculated them with anthrax. He found that alcohol influenced the animals very unfavourably; of the control animals, which received no alcohol, 40 per cent died; of the alcoholised animals, 86 per cent, or more than double, died. By means of suitable culture conditions, one can so far weaken anthrax bacilli that they become only slightly dangerous to rabbits, which are most susceptible to

anthrax. Working with such attenuated cultures, Laitinen found that only 50 per cent of the control animals and 95 per cent of the alcoholised animals died.

In another series of investigations to determine whether animals, after the use of alcohol, become more sensitive or less sensitive to bacterial poisons, Laitinen injected small doses of diphtheria toxine into guinea-pigs. Here again the result was unfavourable to alcohol. Of the control animals, 66 per cent died, while of the alcoholised animals, 86 per cent. The lessening of the resistance of the animals as a result of the alcohol was further shown in this—that the alcoholised animals died considerably earlier than those which had been poisoned by the diphtheria toxine alone.

Laitinen found alcohol to be highly pernicious in all the infectious diseases he investigated, with the single exception of tubercle, where no distinct evidence of an unfavourable influence on the course of the disease could be detected. Attention must, however, be drawn to the fact that in all the researches hitherto mentioned, large, and sometimes even enormous quantities of alcohol were employed—quantities which, indeed, are frequently consumed by drunkards, but which are never prescribed by physicians at the present day. Thus Laitinen gave to the animals experimented on usually more than 2 or 3, and frequently 5, 8, and even 16 c.c. of absolute alcohol per kilo per day, which, in the case of a man of 70 kilos (about 11 stones), would correspond to 140-1,100 c.c. of absolute alcohol per day, or from 10 to 77 ounces of 50 per cent brandy.

Laitinen (1901) has carried out some further researches with smaller doses of alcohol, usually not more than 0.5 to 0.8 c.c. per kilo per day, equivalent to the daily consumption of from about 2½ to 4 ounces of 50 per cent brandy by a man of 11 stones. The influence of these small doses was most distinct in the case of hens infected with anthrax; here a quarter of the alcoholised birds died, while every one of the non-alcoholised birds survived the infection. In the case of rabbits inoculated with attenuated anthrax bacilli, the influence of the alcohol was not so manifest; this time the mortality of the alcoholised, as compared with the non-alcoholised, was only as 50 per cent to 40 per cent, and the duration of life was not notably shorter in the alcoholised animals. Similarly inconclusive was the influence of small doses of alcohol on the poisoning of guinea-pigs by diphtheria toxine; while 64 per cent of the control animals died, but 76 per cent of the alcoholised animals succumbed. Also alcohol in small amounts had no influence on the course of diphtheria poisoning in hens.

Kögler has experimented with Friedländer's pneumobacillus on guinea-pigs, which have a great power of resistance against this organism, even when it is very virulent. As a rule, inflammation, suppuration, and necrosis only occur at the seat of inoculation, while a small proportion of the animals die from general infection and septicæmia. Kögler, as a rule, gave alcohol for the first time about five hours after the infection had started. He administered it by the mouth in a 25 to 50 per cent watery solution, and in single doses of from 0.1 to 0.2 c.c. of absolute alcohol up to a maximum quantity of about 1.5 c.c. per kilo per day, equivalent to the consumption of about 7 ounces of 50 per cent brandy in one day by a man weighing 11 stones. Here again the unfavourable influence of alcohol was shown, the mortality of the control animals being 35 per cent, and that of the alcoholised 55 per cent.

Certainly in all this there is nothing to suggest that alcohol can play the rôle of a disinfectant, or render the body less susceptible to microbes and their toxins.

Quite different are the results obtained by Gruber himself (*ibid.*) in cases of severe collapse. Gruber found that an extreme degree of collapse, ending in death, could be brought about by injecting a certain quantity of a dead culture of the bacterium prodigiosum into the peritoneal cavity of guinea-pigs. Within four, three, or even two hours the temperature of the animals fell below 34° C. (= 93° F.), and death quickly followed with cessation of respiration and circulation. All the non-alcoholised animals treated after the above

fashion died. Gruber tried now whether it might not be possible to stop this process, and save the animals, by heroic doses of alcohol. So soon as a distinct fall of temperature commenced, Gruber gave the inoculated animals hourly quantities of 0·2 to 0·5 c.c. of absolute alcohol, in a 25 per cent solution, by the mouth; this was equal to a daily quantity of 11 c.c. per kilo, equivalent to about 27 ounces of absolute alcohol, or 54 ounces of 50 per cent brandy per day for a man weighing 11 stones. The average duration of life, *mirabile dictu*, was considerably lengthened by this manœuvre; while, on an average, the control animals died within six and a half hours, the alcoholised animals survived the infection an average of 14·4 hours, and, more wonderful still, in the case of two of the alcoholised animals, or 13 per cent, life was saved.

Gruber concludes that in the infectious diseases we should avoid the continuous use of alcohol lest we weaken the resistance of the body, reserving its administration for grave crises.—J. W. F.

SURGERY.

By JOHN PATRICK, M.A., M.B.

Extirpation of the Vermiform Appendix. *Zeller (Stuttgart), in the *Centralblatt für Chirurgie*, advocates the total extirpation of the appendix. The usual procedure of ligature, along with either covering the stump with mesentery or invaginating the stump into the cæcal wall and suture of the bowel over it, is open to the risk of leaving behind a small piece of appendix, which may be full of infective contents, and one cannot tell but that an abscess may form and burst into the abdominal cavity. This happens seldom; but it has occurred, as in a case recorded by Herman, where such an abscess burst into the cavity on the fifth day after the operation, with a fatal result. Instead of resection of the appendix, extirpation is proposed. The appendix is freed from its surroundings, the meso-appendix separated, an elliptical incision is made round its base with a pointed knife, and it is dissected away from the cæcum. The aperture in the cæcal wall is closed by means of a double row of sutures. The escape of fæces is not to be feared, as the bowel will not extrude any material owing to its being paralysed by previous administration of opium, and by its inflamed condition. Fæcal escape may be more securely avoided by inserting a bridle-stitch through the cæcal wall on each side of the appendix before its extirpation, so that the bowel may be drawn forward into the wound. The method is of very simple application, and the author has already used it successfully in many cases operated on in the free interval; he closes the abdominal wall completely without drainage.

The Treatment of Cirrhosis of the Liver by Establishment of a Double Complementary Circulation.—In a long communication on this subject in a recent number of *La Semaine Médicale*, Schiassi, of Bologna, discusses the conditions under which cirrhosis of the liver associated with splenic enlargement arises. The greater proportion of the blood from the intestine and from the spleen finds its way to the liver by one venous trunk—the portal vein. This route is traversed not only by physiological elements, but also by morbid substances, which produce in the liver various alterations, hence the ancient dictum, *Vena porta, porta malorum*. It is possible that some hepatic lesions have their origin from the intestine alone, caused by gastro-intestinal intoxications, and, as a parallel, there are others whose origin is in the spleen. These latter have been demonstrated by Hayem and Banti, who have established the fact that certain hepatic cirrhoses

are determined by the sclerosing action of noxious elements proceeding from the spleen. One of the most frequently observed phenomena of cirrhosis of the liver is ascites; this symptom has an important bearing on the prognosis. The operative treatment of this condition—omentorrhaphy—has been moderately successful. The author's own experience is that omentorrhaphy is a corrective of the phenomena of intestinal passive hyperæmia accompanying cirrhoses, provided it is performed in cases where the patients are not too much enfeebled, and where cardiac and renal complications are absent. It is in non-alcoholic cirrhosis, and especially in those of splenic origin, that this intervention produces its best results. Where there is enlargement of the spleen, the operation should be a combination of splenorraphy and omentorrhaphy. For several reasons, splenectomy, even in hepatic cirrhosis of purely splenic origin, is not to be thought of in comparison with the simpler procedure of fixing the spleen to the abdominal wall. Splenectomy has a very high mortality, due to shock, loss of blood, collapse due to interference with the innervation of the abdomen, &c. Besides, the spleen shows a great tendency to establish a conjoint vascular system with the parietes when adhesions have been formed.

Clinical observations and laboratory experiments all go to show that direct intervention on the spleen is legitimate, because (1) in compelling a portion of the splenic blood to traverse by the parietes, the excess of pressure in the "porto splenic" vein—the splenic tributary of the portal—is relieved; (2) the blood so derived carries with it a part of the toxins elaborated in the spleen, toxins which otherwise would be borne to the liver direct, and there aggravate the already commencing sclerosis; these toxins turned adrift, so to speak, into the general circulation are there easily eliminated or neutralised; (3) in consequence of the intrasplenic circulation becoming more rapid, the organic changes in that organ are more active, with the result that bio-chemical phenomena are accomplished in a manner more lively and less harmful.

These considerations appeared to the author to justify the simultaneous employment of omentorrhaphy and splenorraphy as a means of treating ascites in cirrhosis of the liver with enlargement of the spleen. His method of operating is as follows:—

1. Two incisions are made, both starting from the same point—namely, the left eighth costal cartilage—the first, vertical, extending down to an inch and a half below the umbilical level; the second, transverse, across the upper abdomen of equal length.

2. A large triangular musculo-cutaneous flap is carried over to the right and below, leaving peritoneum alone exposed.

3. A transverse incision of the peritoneum is made a little below the line of the skin incision, thus opening the abdominal cavity.

4. The omentum in its entirety is pulled out through this opening.

5. The omentum is sutured first by its base along the line of the incision in the peritoneum, and then by its free end to the musculo-cutaneous flap; it therefore will lie finally fixed as a portion of the anterior abdominal wall in the space occupied by the subperitoneal fat.

6. The peritoneum is again opened, vertically this time, and the bulky enlarged spleen allowed to bulge into the wound. At each end of the protruding portion of spleen a fold of gauze is inserted.

7. A series of catgut sutures is inserted deeply into the substance of the spleen, traversing the aponeurotic, muscular, and peritoneal layers before entering the spleen and after emerging from it. These are tied one by one, the last to be tied being one at each end, near the gauze folds, a few days later.

This double operation has been performed by the author three times in ascitic patients with enlargement of the spleen, with successful results. He advocates the procedure—or at least the splenic portion of the operation—(1) in splenic anæmia of adults and of children; (2) in Banti's primary splenic enlargement with hepatic cirrhosis in the preascitic period; (3) in malarial splenic enlargement with hepatic cirrhosis.

DISEASES OF CHILDREN.

By R. BARCLAY NESS, M.A., M.B., F.F.P.S.G.

A Case of Hydatid Cyst of the Brain, involving the Right Frontal Lobe and Anterior Horn of the Lateral Ventricle.

Henry Ashby, M.D., F.R.C.P. (*The British Journal of Children's Diseases*, vol. i, No. 2, February, 1904).—"Hydatid cysts are not often found in the brain, and it is safe to say are not easily distinguished from other forms of cerebral 'tumour' of slow growth; but inasmuch as they are more amenable to treatment by surgical means than any other form of cerebral 'tumour,' it is a matter of importance to be able to make a differential diagnosis.

"Hydatid cysts are for the most part of slow growth, and tend to push on one side and compress the brain tissue. They are certain to give rise to increased intracranial pressure, and this increased pressure is likely to render regional diagnosis difficult.

"In the following case, the position of the cyst was localised during life in the right frontal lobe, but the nature of the 'tumour' was only revealed at the *post-mortem* examination. Unfortunately, no exploration was made."

The patient, a boy, aged 8½ years, was admitted into the Manchester Children's Hospital on 24th March, 1903, and died on 24th June, 1903. The *post-mortem*, performed by Professor Sheridan Délépine, revealed the following facts:—

"Seen from above, the brain looks large for a boy of his age. The right frontal lobe is larger than the left. The posterior three-fourths of the middle and inferior frontal convolutions (right side) are flattened, and the sulcus between them obliterated. In a region corresponding to the junction of the middle and posterior third of the inferior frontal sulcus, the grey matter has been entirely destroyed, and the transparent walls of the cyst are visible under the meninges over a circular area measuring one inch in diameter. Around this spot, the brain substance is reduced to a thin membranous layer. A marked bulging of the mesial aspect of the right frontal lobe is visible. This swelling has caused compression of the left frontal lobe for an inch and a half in front of and above the level of the genu of the corpus callosum, and for an equal distance behind that point. The cortex of the right frontal lobe in the region of the frontal bulging is very thin and smooth. The external appearance and the consistency of the parts indicate that the superior frontal convolution, the anterior parts of the middle and inferior frontal convolutions, and the ascending frontal convolution, although compressed, were not actually destroyed. The lower aspect of the right frontal lobe bulges downwards, and must have compressed the orbital plate of the frontal bone. The orbital sulci are obliterated, and the grey matter of the gyra reduced to a membranous layer, through which the outline of the anterior part of the temporo-sphenoidal lobe can be easily recognised. The anterior part of the temporo-sphenoidal lobe, and the olfactory, optic, and ocular nerves, must have been compressed.

"On opening the cyst, it was found to be due to the presence of a large unilocular hydatid of the *tænia ecchinococcus*. The cyst measured three inches in its largest diameter, with thick transparent walls, to which were attached numerous broods of typical scolices, apparently active. A thin fibrous capsule separated it from the surrounding brain substance, and from the cavity of the right lateral ventricle; with the exception of this membrane, the cavity in which the cyst was lodged was continuous with the cavity of the anterior horn of the right lateral ventricle. The basal ganglia of the same side were displaced backwards and downwards, but not destroyed."

"In this case, there were symptoms which suggested cerebral troubles for

some two and a half to three years. The early symptoms consisted of headache, vomiting, and 'faints,' produced probably by the gradual increase in size of the cyst, causing increased intracranial pressure. It is curious that the first focal symptom, with the exception of the local pain, was the twitching of the face on the same side as the lesion, produced apparently by the bulging of the cyst in the direction of the mesial line, and compressing the neighbourhood of the face centre of the opposite side; at the same time, much more compression had been exerted from within on the ascending frontal, and middle, and inferior convolutions of the right side, without, as far as can be gathered from the history, giving rise to any regional symptoms. Towards the close of the illness, there was first an exaggeration of the reflexes, and then a spastic condition of the left arm and leg, due probably to the compression of the right internal capsule.

"A diagnosis of tumour of the right frontal lobe was made during life on the strength of the headache being referred so persistently to the forehead over the right eye; the optic neuritis, with thrombosed veins and hæmorrhages; and the paresis of the third nerve. The eclampsia involving the face, arm, and leg on the same side as the headache suggested compression or irritation of the internal frontal convolution on the opposite side. A hasty assumption that the lesion was a solid tumour too deeply seated for surgical interference is to be regretted, as it was clear that the cyst might have been readily tapped and drained. The case certainly suggests the propriety of at least trephining in all cases of cerebral disease where there are signs of increased intracranial pressure and intense optic neuritis.

"The case offers no evidence one way or another as to the functions of the frontal lobes. That he was dull and stupid is certain, as well as very neurotic and irritable at times; but headaches and high intracranial pressure would readily account for all this. No loss of sensation was detected; unfortunately, the boy's sense of smell and taste were not tested. Practically all the time he was under our observation, he was either very dull and stupid or else in a morbidly excited state."

Enuresis in Children. Percy Lewis, M.D. (*The British Journal of Children's Diseases*, vol. i, No. 2, February, 1904).—"The variety of causes to which this condition is attributed, and the very diverse treatments which have been recommended for its cure, suggest that its pathology has not been accurately studied.

"The subjects of the complaint are mostly unhealthy in aspect, being either anæmic, bilious-looking, or lymphatic. Their skins are dull and inclined to acne or some of the low forms of eczema. They generally are not fond of meat, eat irregularly, and live mostly on farinaceous and saccharine foods. They are disinclined for exertion or school work. If these children are subjected to the usual routine of being taken up frequently during the night to pass water, they are found overcome with sleep and very difficult to rouse. They seem in a kind of stupor, into which they at once relapse on being put back to bed. At each time on being taken up, they pass a large quantity of urine. Yet a short time later they are found asleep, and the bed 'deluged' with water. If the urine be measured, it will be observed that there is seldom less than two pints passed in the night, and that this is sometimes nearly or quite doubled. On analysis, the urine is found to have a very low specific gravity (1002—1005 is not unusual), neutral or alkaline reaction, and with a deposit of triple phosphates or oxalates. Very frequently a trace of albumen is present. The condition, then, at night is one of polyuria. The urine tends to become normal in the daytime, except in cases where the incontinence is continued during the day. The large quantity passed and the way in which the bed is 'deluged' show that the bladder is not emptied until it is full. The unirritating urine does not give a sufficient 'call' to the central nervous system to awaken the patient, but enough to start the necessary reflex for emptying the bladder only.

"The treatment of this complaint, which has for some years been successfully

carried out by the writer, was suggested by the consideration of a similar condition which occurs in infants fed on starchy foods. Such children always pass a larger amount of urine than normal. Their nurses complain that they are always soaking their diapers. When their starchy food is cut off, this symptom disappears. It is the same with the victims of enuresis. In most cases, a rigid anti-diabetic diet removes the symptom in a few days. The *causæ*, however, due to a general depression of health produced by an excessive starchy diet, requires general tonic treatment at the same time. During the cure, starchy food may usually be allowed for breakfast without 'accidents' occurring at night. Without any other treatment hospital cases are relieved often at once, and finally cured, by being taken as in-patients and fed on the ordinary hospital diet. In private cases, even small quantities of bread or cake, given at dinner or tea early in the treatment, cause the bed-wettings to recur. In about three to four weeks, sometimes sooner if the tonic treatment is pushed as well, a normal diet may be given without enuresis happening.

"Whilst not wishing to contend that enuresis is a condition of late rickets, the writer is of opinion that it is a weak bodily condition caused by an excessive starchy diet, and associated with inability to properly digest that excess."

Two Cases of General Gonococcal Peritonitis in Young Girls under Puberty. W. P. Northrup, M.D., New York (*Archives of Pediatrics*, vol. xx, No. 12, December, 1903).—Two girls, sisters, aged 9 and 11 years, acquired vulvovaginitis, developing one week later into peritonitis. The source of infection was a female in the household with whom each occasionally shared a bed.

CASE A.—Girl, 11 years old. "The patient was put to bed because she was not feeling quite as well as usual. It was then discovered that she had a vaginal discharge. On account of these signs and symptoms, a physician was summoned. She seemed to be doing fairly well, under general treatment, with cleansing washes."

At the end of the first week—on the seventh day—she turned seriously ill, with the following symptoms:—"Abrupt onset, pain in abdomen, tenderness most marked in right iliac fossa, moderate abdominal distension, vomiting once, painful micturition, ghastly pallor, marked prostration, extreme relaxation, temperature 104.5° F."

"The vulvovaginal discharge was thick, creamy, containing intracellular diplococci, decolourising by Gram's stain, and pronounced gonococci by Dr. G. A. Tuttle. Dr. George Woolsey, surgeon, was called in consultation. He confirmed the findings above. He noted, further, rigidity over the appendix, the size of the palm of one's hand, with acute pain on pressure. No mass was made out. Right rectus muscle was rigid; breathing thoracic. Temperature then was 104.5° F. In his opinion, there was beginning general peritonitis, due probably to a lesion of the appendix. Dr. Woolsey performed laparotomy six hours from the time the patient was just beginning to be 'drooping' and sick."

"A few drachms of straw-coloured, clear fluid were found deep in the pelvis. The peritoneum was red, the vessels distended in a manner to cause remark by each observer in turn. It was a most striking example of 'arborescent injection.' The peritoneum seemed just as red as injected vessels could possibly make it; especially was this marked over the cæcum. Beyond this extreme injection of vessels, and the few drachms of fluid in the pelvic fossa, there was no obvious inflammatory change. It was afterward commented that the membrane was less glistening than usual, a little duller and 'sand-papered,' though not dry. The appendix was healthy; the tubes and ovaries were not removed. Though the injection of vessels was noted in all the coils of intestines exposed to view, the injection was most marked on the cæcum and colon. These last were blood-red."

"The patient recovered without incident; vulvovaginal discharge continued

three months in all. After more than a year has elapsed, the nurse, who was in attendance, reports the patient entirely well."

CASE B.—Girl, 9 years old. This patient, a sister of the first, had been sleeping with Case A, and with the female by whom Case A was probably infected. Cases A and B ran much the same course. In Case B, the diagnosis was based on the experience gained in Case A. The two cases were different in but one point, that the pain and greatest tenderness of Case B were referred to the splenic region. After seeing the peritoneal lesion of Case A, there was no thought of operation. "From all recorded French cases and from the two above, one gains the impression that there is something characteristic about the picture of ghastly pallor and alidity, profound prostration and relaxation, which suddenly lays low these young girl patients. They present a picture not easily forgotten—pinched and blue; pale and relaxed; whimpering and flexed."

Comby has published eight cases collected from the records of Hôpital Trousseau and Hôpital des Enfants Malades (Paris), *Archives de Médecine des Enfants*, September, 1901, vol. iv, No. 9, p. 513. Abstracts of these cases are given in connection with the two reported.

BACTERIOLOGY.

By ALEX. R. FERGUSON, M.D.

A Pyogenic Spirillum. D. Mezincescu (*Centralbl. f. Bakteriologie*, I. Abt., Orig. Bd. XXXV, No. 2).—The organism was found pure in a case of calculous pyelitis which had been operated upon. The pus in which the organism was found was of thick consistence, odourless, and of reddish brown colour. The spirilla were from 3.6 to 8 micromillimetres in length, and showed 2 to 9 spiral curves of approximately equal diameter. More rarely, longer forms were found. Two or three occurred in each microscopic field.

Occasionally, the organism was found in the interior of cells. Under these conditions, it was broken up and somewhat resembled the vibrio of cholera. It stained with difficulty by the ordinary aniline dyes, but retained carbol-fuchsin well; it did not stain by Gram's method.

The organism stained very beautifully by the Romanowsky method, showing a protoplasmic body of blue tint and a few chromatic bodies of reddish violet colour. Similar staining results were obtained with the fragmentary bodies mentioned above. Culture experiments proved negative; the organism could not be got to grow on any of the ordinary media. Inoculation experiments into mice and other laboratory animals were also negative in their results.

The Giant Trypanosoma Discovered in the Blood of Bovines. Professor Alfred Lingard (*Centralbl. f. Bakteriologie*, I. Abt., Orig. Bd. XXXV, No. 2).—The trypanosoma in question must certainly be one of the largest hæmatozoa. Unfortunately, only single examples of this hæmatozoön were observed on the same date, and these were only recognised in fresh cover-glass preparations of blood, so that but limited opportunities of noting peculiarities and the reaction of the organisms to staining methods were obtainable.

The trypanosome was first seen in the blood of a bull which had received an injection of horse's blood containing a small trypanosome. The organism in length was fourteen times the diameter of a red blood corpuscle, and in breadth was two and a half to three times the diameter of a red corpuscle. A round nucleus was present. The movements of the flagellum and of the undulating membrane were very vigorous, lashing the corpuscles to right and left.

Another trypanosome, of somewhat similar dimensions, was found in the

blood of a cow which had also received an injection of blood containing rat-trypanosomes.

The author believes that, in the giant trypanosomata described, he has observed two or three species; and further, that they may exist in an immature form in the blood of the rat, along with the species more commonly found in this animal, and that fuller development occurs on the injection of the blood into a bovine animal.

GROTHUSEN, in a short contribution (*Arch. für Schiff. und Tropenhyg.*, 1903, Heft. 8), has shown the possibility of infecting zebras with trypanosomes, so that the hope that these animals might be found to be immune and therefore useful, when trained for transport purposes, has not been fulfilled.

The Bactericidal Influence of the Radium Rays. R. Pfeiffer and Friedberger (*Berlin. Klin. Wochens.*, 1903, No. 28).—The researches were carried out with 25 milligrammes of radium bromide supplied by Buchler & Co., in Braunschweig. The radium salt was placed in a small capsule of vulcanised rubber covered with a sheet of mica, over which was placed a sheet of brass with central aperture, so that plate cultures placed over the mica were separated from the radium by 1 cm. Under these circumstances, a distinct bactericidal action was noted. If plate cultures of bacillus typhosus, for example, were treated in this manner, an exposure of forty-eight hours to the rays in the dark sufficed to totally prevent the appearance of any growth in the central part of the plate (the exposed portion), while colonies developed in every other part. The medium itself was not influenced in any way by the rays; only the bacteria subjected to the "radium rays." Anthrax spores dried on silk threads were killed after seventy-two hours of exposure to the rays; forty-eight hours' exposure was not quite sufficient for this purpose.

The authors, on the ground of these observations, express the hope that the radium rays may prove the most potent therapeutic remedy in infective processes in the skin (lupus, &c.). The comparatively long exposures to the rays necessary to ensure complete bactericidal action may be a source of some danger, however, in practical treatment of cases.

The Differentiation of the Streptococci Pathogenic to Man by Means of Blood-Agar. Schottmüller (*Mün. Med. Wochens.*, 1903, Nos. 20 and 21).—The medium used was agar, to which a small quantity of human blood was added (2 c.cm. blood to 5 c.cm. agar). The blood was obtained from the heart, *post-mortem*, in selected cases, with the usual precautions, and it was found in most cases to be sterile after twelve to twenty-four hours' standing. Blood-bouillon was also used. After inoculation of this medium, there was seen in the neighbourhood of the colonies a decolourisation of the medium in some cases, while in others special colouring matters were produced. By these means, the author maintains that it is possible to differentiate the streptococcus of erysipelas from the less pathogenic streptococcus mitior or viridans. He found that the medium restrained the growth of the latter organism more markedly than in the case of the streptococcus erysipelatis.

The highly pathogenic streptococcus mucosus also gave characteristic growths on the same medium. This organism has been, according to Schottmüller, associated with the following diseases:—Paranephritic abscess, perforative peritonitis, purulent meningitis, croupous pneumonia, pyelephlebitis, and sepsis.

Fraenkel's pneumococcus was found, on this medium, to give rise to a dark green pigment (not due to decomposition of the blood), which apparently could be regarded as characteristic of this organism.

Upon an Extensive Outbreak of Food-Intoxication and Infection of Unique Origin. Ohlmacher (*Journal of Med. Research*, vol. vii, 1902, No. 4).—The author reported on an acute illness, characterised

by diarrhoea, which affected 218 persons in an institution for epileptics. This outbreak was caused by the accidental contamination of oatmeal with fragments of plaster from the ceiling of the room in which the supply was kept. From this plaster dust, *bacillus coli* and *proteus vulgaris* were both isolated, and their pathogenicity demonstrated by inoculations into guinea-pigs. Bacteriological investigations on the faeces of the affected persons agreed with the results of those on the food. A ptomaine-extract from the contaminated meal was obtained, a few drops of which, placed on the tongues of cats, gave rise to vomiting and diarrhoea.

Books, Pamphlets, &c., Received.

- A Handbook of Ophthalmic Science and Practice, by Henry E. Juler, F.R.C.S. With Illustrations. Third Edition, Revised and Enlarged. London: Smith, Elder & Co. 1904. (21s. net.)
- King's College Hospital Reports, being the Annual Report of King's College Hospital and the Medical Department of King's College. Vols. VI, VII, and VIII. London: Adlard & Son. (7s. 6d. each.)
- Progressive Medicine: a Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences, edited by Hobart Amory Hare, M.D., assisted by H. R. M. Landis, M.D. Vol. IV, December, 1903. London: Rebman, Limited. 1903. (15s. net; subscription for one year, £2, 12s. 6d.)
- A Manual of the Practice of Medicine, prepared especially for Students, by A. A. Stevens, A.M., M.D. Sixth Edition, Revised and Enlarged. Illustrated. London: W. B. Saunders & Co. (10s. 6d. net.)
- Atlas of the External Diseases of the Eye, including a brief Treatise on the Pathology and Treatment, by Prof. Dr. O. Haab. Authorized Translation from the German. Second Edition, Revised, edited by G. E. de Schweinitz, A.M., M.D. With 98 Colored Lithographic Illustrations on 48 Plates. London: W. B. Saunders & Co. 1903. (13s. net.)
- The Treatment of Fractures, with Notes upon a few common Dislocations, by Charles Locke Scudder, M.D. Fourth Edition, Thoroughly Revised, with 688 Illustrations. London: W. B. Saunders & Co. 1903. (21s. net.)
- Husband's Forensic Medicine, Toxicology, and Public Health, Seventh Edition, Revised and Enlarged, by R. J. M. Buchanan, M.D., and E. W. Hope, M.D., D.Sc. Edinburgh: E. & S. Livingstone. 1904. (10s. 6d. net.)
- Charles White, F.R.S., a great Provincial Surgeon and Obstetrician of the Eighteenth Century: An Address, by Charles J. Cullingworth, M.D. With Notes and Illustrations. London: Henry J. Glaisher. 1904. (2s. 6d. net.)

- Midwifery for Midwives**, by W. Denison Wiggins, M.R.C.S., L.R.C.P. London: Baillière, Tindall & Cox. 1904. (3s. 6d. net.)
- Vaginal Tumours**, with special reference to Cancer and Sarcoma, by W. Roger Williams. London: John Bale, Sons & Danielsson, Limited. 1904. (5s. 6d. net.)
- Dispensing made Easy**, by Wm. G. Sutherland, M.B. Bristol: John Wright & Co. 1904. (3s. 6d. net.)
- A Guide to Urine Testing**, for Nurses and others, by Mark Robinson, L.R.C.P. Second Edition. Bristol: John Wright & Co. 1904. (1s. net.)
- Memoranda on Infectious Diseases**, for the use of School Teachers, by James W. Allan, M.B. Bristol: John Wright & Co. 1904. (6d. each; 4s. doz.)
- Verhandlungen der Berliner Medicinischen Gesellschaft aus dem Gesellschaftsjahre, 1903.** Herausgegeben von dem Vorstande der Gesellschaft. Band XXXIV. Berlin: Druck von L. Schumacher. 1904.
- Text-Book of Histology**, including the Microscopic Technic, by Dr. Philipp Stöhr. Translated from the Tenth German Edition by Dr. Emma L. Bilstein. Edited, with additions, by Dr. Alfred Schaper. With 353 Illustrations. London: Rebman, Limited. 1904. (14s. net.)
- Diseases of the Gall-Bladder and Bile-Ducts**, including Gall-Stones, by A. W. Mayo Robson, F.R.C.S., assisted by J. F. Dobson, M.S., F.R.C.S. Third Edition. London: Baillière, Tindall & Cox. 1904. (15s. net.)
- The Infectivity of Enteric Fever**, by Alexander Collie, M.D. Bristol: John Wright & Co. 1904. (1s. 6d. net.)
- The General Pathology of Inflammation, Infection, and Fever**, being the Gordon Lectures for 1902, by E. W. Ainley Walker, M.A., D.M. London: H. K. Lewis. 1904. (4s. 6d. net.)
- Ailments of Women and Girls**, by Florence Stacpoole. Bristol: John Wright & Co. 1904. (Stiff boards, 2s.; cloth, 3s. net.)
- Manual of Operative Surgery**, by H. J. Waring, M.S., M.B., B.Sc. Second Edition, Illustrated with 472 Figures. Edinburgh: Young J. Pentland. 1904.
- Practical Gynæcology: a Comprehensive Text-Book for Students and Physicians**, by E. E. Montgomery, M.D., LL.D. Second Revised Edition. With 539 Illustrations. London: Rebman, Limited. 1904. (25s. net.)
- An Atlas of Human Anatomy**, for Students and Physicians, by Carl Toldt, M.D., assisted by Professor Alois Dalla Rosa, M.D. Translated from the Third German Edition, and adapted to English and American and International Terminology, by M. Eden Paul, M.D. Third Section. *D. Myology* (Figures 490 to 640 and Index). London: Rebman, Limited. 1904. (8s. 6d. net.)

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FOUR WEEKS ENDING 20TH FEBRUARY, 1904.**

	WEEK ENDING			
	Jan. 30.	Feb. 6.	Feb. 13.	Feb. 20.
Mean temperature, . . .	42·6°	37·1°	38·3°	37·9°
Mean range of temperature between day and night, .	8·6°	8·3°	9·1°	11·9°
Number of days on which rain fell, ...	5	4	3	3
Amount of rainfall, . ins.	0·06	0·37	0·36	0·36
Deaths registered, . . .	272	267	305	360
Death-rates, ...	17·8	17·5	19·9	23·5
Zymotic death-rates, . .	1·8	1·2	2·0	2·2
Pulmonary death-rates, .	4·8	5·9	7·2	7·6
DEATHS—				
Under 1 year, ...	55	52	74	77
60 years and upwards, .	60	73	67	82
DEATHS FROM—				
Small-pox, ...	3	2	1	2
Measles, ...	6	6	11	8
Scarlet fever, ...	3	2	2	...
Diphtheria, ...	5	3	1	4
Whooping-cough, . . .	1	2	6	4
Fever, ...	1	...	1	1
Diarrhoea, ...	8	3	9	15
Croup and laryngitis, .	3	...	...	1
Bronchitis, pneumonia, and pleurisy, ...	49	68	71	104
CASES REPORTED—				
Small-pox, ...	46	46	25	26
Diphtheria and membranous croup, ...	18	19	11	12
Erysipelas, ...	20	21	17	21
Scarlet fever, ...	36	31	32	28
Typhus fever, ...	...	1	...	2
Enteric fever, ...	13	13	12	11
Continued fever, ...	...	...	...	7
Puerperal fever, ...	3	2	...	1
Measles,*	323	228	363	376

* Measles not notifiable.

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ORIGINAL ARTICLES.

ABDOMINAL SURGERY, RETROSPECTIVE AND PROSPECTIVE: BASED ON FOURTEEN YEARS' PERSONAL EXPERIENCE IN THE WARDS OF THE VICTORIA INFIRMARY, GLASGOW.¹

By A. ERNEST MAYLARD, B.S., M.B.LOND.,
Surgeon to the Infirmary.

If, gentlemen, the middle of the last century may be taken as one of the epoch-making periods of surgery, when anæsthetics were introduced, and the sixth decade of that century as another period of great surgical advance when Lister propounded his life-saving principle of antiseptics—if, I say, we may regard these as two great epochs in the making of surgery, then I venture to think that we must be allowed to add a third at the close of that wonderful century. The field which abdominal surgery has opened out is so vast and, withal, so replete with life-saving and life-prolonging possibilities that it surely deserves to be reckoned with anæsthetics and antiseptics as one of the three great factors in raising surgery to the high position it now holds in the domain of general medicine.

¹ An address delivered in the Victoria Infirmary before the members of the Southern Medical Society on 3rd March, 1904.

In order to give you some idea of the position which abdominal surgery held in a large general hospital only about twenty-five years ago, will you allow me to refer to a little personal experience of my own? In the early months of 1880 I held the position of senior house surgeon at Guy's Hospital, London. There were between three and four hundred surgical beds. It was part of my duty to administer the anæsthetic on the two stated operation days of the week. I kept a careful record of all the administrations—they were 161 in number, and out of these there were only 3 abdominals—2 ovariectomies and 1 colotomy. I cannot say that these were the sole abdominals performed during that period of almost four months, any more than that the 161 administrations represented the total number of operations executed. But from my position as senior house surgeon, whose special duty it was to administer anæsthetics, I believe it likely that in that period these were the only three abdominals performed.

In the early eighties, when on the surgical staff of the Glasgow Western Infirmary, it was also rare to see the abdomen opened. When such an event did take place, it was usually with a crowded theatre, and in the presence of as many of the staff as could be there. If my memory serves me rightly, I think the earliest abdominals were for ovarian tumours.

Now, let me descend to my own individual work in the Victoria Infirmary. It was, as you know, in 1889 that, owing largely to the efforts of this Society, the Victoria Infirmary was completed and opened for the admission of patients; and since that time, I may still further add, its great success and usefulness has depended mostly upon the interest which members of the profession on the south side of Glasgow have taken in advising patients to enter its portals for treatment. I am tempted to emphasise not a little this interest, for I am persuaded that it is solely by an increase in the regard for the work done there that many suitable cases which still linger outside its portals, and which come more particularly under that branch of surgery to which I wish to direct your attention this evening, will be induced to seek the benefits that it is possible to confer.

Reviewing, now, the abdominal cases which have been admitted and operated upon in my male and female wards since the opening of the institution, the following interesting facts are revealed:—

IN	MALE.	FEMALE.	TOTAL.	IN	MALE.	FEMALE.	TOTAL.
1890	0	0	0	1897	8	6	14
1891	3	0	3	1898	8	15	23
1892	3	0	3	1899	17	12	29
1893	4	0	4	1900	18	20	38
1894 ¹	5	5	10	1901	14	34	48
1895	4	2	6	1902	18	44	62
1896	5	6	11	1903	34	63	97

¹ First year of female ward.

I ought to define what I mean by an abdominal operation. Only those operations are considered such where the abdominal cavity has been freely opened. Thus, then, the opening of a localised abscess from whatever cause, so long as it was shut off from the general peritoneal cavity, would not be considered an abdominal operation; nor would the radical cure of an inguinal or femoral hernia; nor the fixation of a movable kidney. I have also not included vaginal hysterectomies, nor excisions of the rectum, nor suprapubic operations upon the bladder. But while excluding these, it is not a little interesting to note that the freedom with which one and all these operations are performed has advanced *pari passu* with the more strictly abdominal operations. Thus, the radical cure of hernia was still a comparatively rare operation five and twenty years ago, and now I should be afraid to say how many cases are treated by operation; certain, at least, it is that we very seldom think of advising the use of a truss in any case that appears in the slightest degree suitable for operation, which the large majority are. But there is another point of interest in connection with these abdominals, as they have been admitted yearly in increasing numbers. The order appears to have been pretty much as follows:—The earliest cases were mostly exploratory laparotomies, performed more with a view to clearing up difficulties in diagnosis than with any definite intention of proceeding further; following them, operations upon the appendix, all of the recurrent kind, and usually after several attacks. Then came operations upon the intestines, gall-bladder, and passages; and within recent years the stomach has largely come in for treatment. Lastly, I may mention the pancreas, and it was only last year that we operated on our first case of acute pancreatitis.

In reviewing more in detail these operations, I shall limit my remarks more particularly to that branch of abdominal surgery with which I have more or less identified myself during the last ten years. I refer to the surgery of the

alimentary canal, comprising those immediate adjuncts of it, the liver and its accessories, and the pancreas. Gynæcological cases were, until comparatively recently, not a class that found their way, or were admitted, into my wards.

In discussing these separate regions I shall, as shortly as I can, state to you what has been accomplished, and what we may still hope to achieve in the future.

ŒSOPHAGUS.

First, as regards the œsophagus. Strictures, either innocent or malignant, are almost exclusively the affections dealt with by abdominal section. In the case of the former, many a bad stenosis, which has proved impermeable to the passage of dilators by way of the mouth, has been overcome and successfully treated by attacking the constriction through an opening in the stomach. In the case of malignant disease the performance of gastrostomy is still the only means of affording relief. The operation, when first practised, possessed not a few disadvantages, but as now executed it provides the patient with a means of sustaining life, and relieves the distress and often pain associated with attempts to get food past the obstruction. The operation should be performed as soon as the patient begins to find pain and difficulty in swallowing semi-solid food. It ought not to be delayed to the latest stages of the disease.

STOMACH.

I am not going to trouble you with much that you must now know concerning the treatment of manifest obstructive disease of the pylorus. It is sufficiently generally recognised that surgical treatment can alone afford the necessary relief. I shall, therefore, not deal so much with what has been accomplished as with that which, I believe, still remains to be done. Understand, in the first place, that, with all proper precautions, we can make the most complete internal and external examination of the stomach, irrespective of the performance of any definite operation upon the organ. With this understanding, then, what is wanted is that these examinations be permitted and advocated in all cases where gastric diseases are protracted, or, at anyrate, fail to prove amenable within a reasonable time to the ordinary methods of treatment. Now, one advantage of this would be that we should come upon malignant disease much earlier than we usually do, when, indeed, we might reasonably hope that

complete removal would prove possible, and a perfect cure result. Yet another great advantage would accrue from the fact that a direct visual and tactile investigation of the organ would admit of the detection of certain conditions otherwise undiscoverable. I ventured, in a paper read before the Clinical Society of London last December, to express the belief that a number of chronic gastric disturbances in young adults owed their origin to some form of abnormal congenital narrowing of the pylorus. I have operated upon eight cases successfully, everyone of which I believe to have been an example of this otherwise undescribed condition. Again, there is the all important and frequent disease of chronic gastric ulcer. It is only since we have come to deal with the stomach operatively that we have learnt to know how many and harmful are the complications associated with this condition. Thus, we have perforation, hæmorrhage, abscess, fistulæ, adhesions, displacements, contractions of the body of the organ as well as of the pyloric orifice, and in some instances the subsequent development of malignant disease.

Now, gentlemen, I was bold enough once to predict that the proper treatment of chronic gastric ulcer would come to be by operation. That prediction has already come true, and the opinion is growing in favour, amidst much opposition, that if we wish to prevent the many dangerous and painful sequences to chronic ulceration we must check the progress of the disease in its earlier stages. Both in this country and in America is this attitude in relation to the subject of operation being more and more pressed; and no wonder, when it is now possible to say that in experienced hands the mortality of the operation for the relief of gastric ulcer is at the outside less than 5 per cent. I speak advisedly when I say that I believe more lives would be saved, more complications prevented, more suffering spared by the timely performance of a gastro-jejunostomy than could ever be accomplished by the conventional methods of purely expectant treatment. It is no argument to say that because some cases, and possibly the majority, can be cured completely and permanently by simple medicinal and dietetic measures, that, therefore, operation is not called for; rather should the reasoning be that, because so many are not perfectly cured, therefore, what we now reasonably regard as the safer precaution should be adopted in all. For what may be unnecessary, yet quite safe, in some, will prove the sole salvation of others.

Since I wrote what I have just read, a most interesting and instructive paper has appeared on this particular subject.

Dr. J. W. Russell,¹ of the Birmingham General Hospital, has, at the expense of considerable trouble, traced the histories of forty-seven cases of practically undoubted gastric ulcer treated in the infirmary between the years 1892 and 1899. Allowing an interval of two years as the minimum for the time which had elapsed since the last case left the infirmary, he found that nearly one half, or, more correctly, 44·7 per cent, were still suffering from gastric symptoms; 14·9 per cent were having repeated and definite attacks, with intervals of immunity; and 29·8 per cent were suffering from almost continuous pain. In commenting upon this somewhat surprising revelation, Dr. Russell says—"On the whole, I am inclined to think that the group affords some justification for the plea often made in favour of more frequent resort to operative interference in persistent cases of gastric ulcer, always providing that the mortality of the operation can be kept at a really low figure, and that the results in the cases operated upon can be shown to be permanently good."

What this investigation reveals is exactly what I ventured to predict in my introductory presidential address before the Glasgow Pathological and Clinical Society in October, 1902. I stated then that I was convinced that many patients sent out of the medical wards as cured cases of gastric ulcer were, in reality, only temporarily relieved; that, judging from the number of cases that came under the surgeon's hands subsequently for the various sequelæ and complications arising from this disease, it was impossible to believe that the cases alleged as cured by medicinal and dietetic treatment were so frequent as supposed. The statistics of Dr. Russell I consider most valuable, for they deal with convincing facts; and, if I am not mistaken, they will very fully bear out what is the experience of many men in general practice—that a large number of the cases dismissed from the medical wards of our large infirmaries and hospitals, and believed by the physicians in charge to have been cured, are, as I have said, only temporarily relieved. As regards treatment by operation, I am quite willing to allow that it is still on its trial. We have equally to show that our surgical intervention does something more than temporarily relieve, that it really does effect a complete and permanent cure. Time will do that. But, meanwhile, reason, I think, is on the surgical side. For by the performance of gastro-jejunostomy we know that hyperchloridia, a constant, and possibly even a causative, factor in gastric ulcer, is certainly at once relieved; and we equally

¹ *Lancet*, 30th January, 1904.

know that a dependent opening in the stomach must, through the rapid discharge which it admits of the gastric contents, give that rest to the stomach so necessary in the case of all other lesions of a purely inflammatory nature.

Interesting as is this subject, I must not pursue it further; but it serves, at least, to indicate how wide is the field of abdominal surgery, even though it were to be considered only as it refers to chronic ulcer of the stomach.

There are a class of obstinate and obscure affections of the stomach which seem to owe their existence to the maintenance of the normal activity of the organ. To whatever they may owe their origin, and whether they be pathological or functional, it would seem that rest is the one essential for effecting relief or cure. Among some of these states I may mention chronic gastric catarrh, various forms of chronic dyspepsia dependent upon altered secretion, such as hyperchloridia, achloridia, spasm of the pylorus, atonic dilatation. It is, of course, assumed that the conditions are local in origin, and not dependent upon the more remote affections. In one and all of these I have seen permanent improvement follow upon the performance of a gastro-jejunostomy. So far, then, as abdominal surgery is concerned in respect to the treatment of gastric disease, there is still an open field before us for further operations.

INTESTINES.

Passing now to the intestines. Possibly in this connection what we most need still is improvement in the matter of diagnosis. Nothing seems to indicate this more strikingly than the whole subject of acute intestinal obstruction. Over and over again, the cry of the operator is—"Too late, too late." I am convinced that could we but operate within the first twenty-four or forty-eight hours of the onset of the acute symptoms, very few lives would be lost. It is when the fatal period of septic intoxication has been reached that all our efforts fail. There is nothing that we cannot attempt successfully in the way of intestinal surgery, up to the removal of the 6-foot limit of the small intestine or the whole of the large bowel, but all such attempts are worse than useless if the fatal period of intoxication has been entered upon. So far, then, as acute intestinal obstruction is concerned, abdominal surgery can do practically everything, *if only* the case can be dealt with soon enough.

Then, as to malignant disease. Here also the question is one largely of diagnosis. What is wanted is that the case be

dealt with operatively before the physical existence of a tumour. I quite acknowledge that the presence of a tumour felt externally is no bar to its removal, or to the relief which may be afforded; but I am almost convinced that the idea of total extirpation of the disease is out of the question. If a malignant tumour of the bowel can be felt through the abdominal parietes, the chances are greatly in favour of the disease having extended beyond the possibility of entire removal.

In connection with the large bowel, I should like to direct special attention to the treatment of chronic disease of this region. In all affections involving the cæcum, ascending, transverse, descending colon and sigmoid flexure, where the question is not one of excision, we have the power of relieving this portion of the intestinal tract of practically any part in the rôle it usually plays of receiving, retaining, and expelling the normal fæces. By dividing the ileum near its junction with the cæcum, closing the distal end, and implanting the proximal into the lower part of the sigmoid or upper part of the rectum, we can throw the whole of this tract—that is, practically the whole of the large bowel—out of action, and so either circumvent any possible obstruction existing in its course, or relieve an inflamed or ulcerated area from irritation and movement. I have performed this operation successfully, both for extensive non-removable malignant disease and for chronic mucous colitis. It has, I believe, a part to play in the future, far in advance of anything that has been previously attempted. Thus, the condition of chronic constipation has many causes for its explanation. In some instances I have seen the colon greatly distended and hypertrophied from the obstructive effects of the normal splenic flexure. In others, again, of a similar mechanical nature, the hepatic flexure seems to have caused troublesome obstructive constipation. Then there are the various inflammatory and ulcerative conditions, all of which probably depend, directly or indirectly, upon the restless activity of the bowel and the constant irritation to which the mucous membrane is subjected in the normal passage of the fæces. To divert the contents of the bowel and give the parts rest is, in many instances, to effect all that is needed. There is another condition of the colon known as idiopathic dilatation, or possibly congenital enlargement of the part. It is invariably fatal. I am not aware that this operation of short-circuiting has been performed for it, but if not, it seems to be an eminently suitable one for affording the necessary relief.

APPENDIX.

I must now very briefly refer to the appendix. It may, and probably will, be said that I have been bold, if not unwarrantably venturesome, in some of the proposals already put forward; but now I am going to lay myself out to attack from the opposite side. I have not yet been able to bring myself into line with those who advocate operation in all cases of acute appendicitis within the first forty-eight hours. But experience at least has taught me this: First, that every case should be operated upon where, after the fourth day, the symptoms are not showing unmistakable signs of subsiding. It has, unfortunately, fallen to my lot to lose cases, where delay in operation has been exercised, in the face of symptoms that have not definitely commenced to disappear at or before the termination of this period. Fatal results in most of these cases have been due to septic intoxication. Just as in acute intestinal obstruction from whatever cause, or in acute perforative peritonitis, a period of intoxication is sooner or later reached when no operative measures can save life; so in that form of insidious, and often most deceptive, gangrenous appendicitis, a time quickly comes when intoxication ensues, and no means whatever can check the fatal progress of the disease. Secondly, I have learnt how frequently an attack of appendicitis is due to the kinking of some part of the organ. And further, how rarely such a condition as simple uncomplicated catarrhal appendicitis exists. When catarrh of the organ is present, it, with very few exceptions, owes its origin or is dependent upon some mechanical cause. Either the mucous membrane is irritated by the presence of a concretion in its canal, or, as I have indicated above, a kink or constriction exists, which prevents the normal discharge of mucous from the distal parts of the tube. Further, experience teaches that where these conditions exist, sooner or later an attack will take place, fraught, it may be, with the gravest possible results.

Now, from all this, the gleanings of past abdominal work on the appendix, I am prepared to advise that an attack of appendicitis—no matter how simple in its earliest manifestation, even though it be represented by little more than vague colicky pains in the right iliac region—at once places the patient under the category of those who require sooner or later surgical treatment. Probably no period exists in the whole course of the disease, considered either in the light of a single attack or in repeated recurrences, which is more safe

and suitable for operative treatment than about ten days to a fortnight after the first attack. The acute inflammation, if it existed, has subsided, the adhesions are comparatively soft and easily separated, and the patient generally is in the best possible condition for the rapid and sound healing of a surgical wound. To operate before Nature has set up her barriers is, in acute appendicitis, as in any acute inflammatory process elsewhere, a procedure to be avoided if possible. There are times, of course, when this desirable end cannot be waited for, and we must operate in order to escape the greater risks entailed by delay.

RECTUM.

A few remarks upon the rectum will bring to a close what I have to say upon the alimentary canal. Abdominal surgery has helped much in dealing with certain affections of the rectum. In cases of obstinate prolapse, it is possible to pull up the slack of the bowel and fix it to the abdominal parietes through an opening made in the left iliac region. I have successfully accomplished this in two cases. I can see that there may be conditions of such an extreme character that this simple anchoring might not be sufficient, in which case I should not hesitate to remove entirely a portion of the upper rectum and lower sigmoid, shortening the canal to the required extent.

In disease situated high up in the rectum, where, either from extensive malignant disease or other cause, removal could not be entertained, a system of short-circuiting could be carried out by planting the proximal end of the divided ileum into the bowel below the seat of obstruction. Further, it has been shown that when the question becomes one of excision, an approach through the abdomen often aids in the measures which must also be executed by way of the perineum.

From various causes the rectum is subject to chronic ulceration. The condition is painful, and the ulcers cannot heal owing to the constant passage over them of the irritating fæces. It is possible to make an artificial anus in the left iliac region, and, by diverting the fæces away from the diseased part for a time, give the patient comfort, and the ulcers an opportunity to heal. This operation I have performed three times, with much benefit to the patients, who at once began to improve and put on flesh.

GALL-BLADDER AND BILE PASSAGES.

I now turn to the gall-bladder and bile-ducts. How much abdominal surgery has done in this department I need hardly remind you. Stones of every shape, size, and number have been removed from the gall-bladder, the cystic duct, the hepatic and common ducts. But what I want more particularly to emphasise in this connection, are the complications which abdominal surgery has taught us arise as the result of the existence of these stones. More and more are we becoming alive to the various ravages which an impacted stone in any part of the biliary tract is capable of producing; and it is just because of these grave sequences, and the great difficulty sometimes encountered in dealing with them, that the question is beginning to be opened up as to whether more good is not to be gained, more trouble and suffering avoided, by much earlier operative interference in cholelithiasis than has hitherto been the practice. It is a simple and comparatively safe operation to extract stones that lie loose in the gall-bladder, but it is a difficult and sometimes dangerous one to attempt to do so when they have entered upon their wandering and irritating career, productive of inflammation, suppuration, ulceration, adhesions, and perforation. There is no doubt, in studying the life-history of a gall-stone, that, in most instances, its first inception is in the gall-bladder; that it is free, and so long as it does not wander away from its natural habitat, or cause inflammation around it, no harm is caused to the part, nor does the patient suffer any discomfort. We have very certain proof of this harmless existence in the number of cases where, after death from some other cause than that in any way connected with liver and its ducts, the gall-bladder is found packed with neatly fitting faceted stones, and yet the previous history of the patient has afforded no evidence of gall-stone trouble. So, then, when we have a definite attack of biliary colic, we may be pretty sure that the stage of quiescence has passed, and that of activity commenced: that the presence of gall-stones is being demonstrated either by some inflammatory mischief connected with the gall-bladder, or similar trouble is being set up in the attempted exit of the calculus from that viscus. The source of all anxiety lies in the impossibility of knowing whether the first of such attacks will end in the successful passage of the stone or stones into the bowel, or whether it is the precursor of others to follow, each of which may originate and augment changes that will sooner or later cause grave mischief.

Now it is because abdominal surgery has so enlightened us on these later ravages which an impacted stone is capable of producing, that the question is coming to be asked, whether the first unmistakable evidence of the existence of gall-stones does not reasonably allow of the consideration of operation. I say merely "consideration," because I believe that there are certain symptoms the presence of which may well retard the entertaining of operative intervention. I allude more particularly to the passage of gall-stones in the stools. If during the first attack of biliary colic, a patient becomes suddenly conscious of relief from acute pain; or if a stone—even though it be but a single one—is found in the motions, and associated with, or rather following upon, these conditions, there is a subsidence of all other symptoms, we may reasonably hope that a complete and permanent recovery will ensue. But if, on the other hand, there are no such evidences, then I think the question of operation should be raised, and the more so if there still linger indications that stones are present. I now advise that no patient should be allowed to pass through more than two attacks of biliary colic in neither of which has the presence of stones been detected in the stools. As I have said, the operation of removal of stones loose in the gall-bladder is so safe and simple that I think no patient should be allowed to run the risk of the grave issues dependent upon repeated attacks of biliary colic.

PANCREAS.

As regards the pancreas, abdominal surgery has possibly more to consider in prospect than to record in review. We have so far learnt to know that there are inflammatory conditions which can be relieved both by directly attacking the organ through the lesser cavity of the omentum, and indirectly by draining its passages by means of a cholecystostomy. We have learnt to know that in not a few cases where a tumour is felt in the region of the head of the pancreas and diagnosed as malignant, everything has disappeared after operation, showing that it was simply inflammatory. There are certain other conditions of the pancreas also where surgery may yet hope to give relief; these, however, I must leave out of further consideration.

Before concluding, I wish to pass just a few practical remarks upon the subject of abdominal surgery generally. It used to be one of the outcries against abdominal operations,

that the patients afterwards frequently presented ventral hernia, the result of a weakened cicatrix. Fortunately, although our work has so vastly increased, this complaint seems much less to be heard of. No doubt the greater attention to antisepsis and to careful suturing accounts for this. But still we occasionally do meet cases of ventral hernia after operation, and the cause is almost always the failure to obtain primary union. If so-called stitch abscesses ensue, we may be pretty sure to get a weakened cicatrix, and that weakening is in direct proportion to the amount and extent of the supuration which has taken place in the wound.

I have now for two years adopted a precaution with which I am well pleased. In all my hospital cases, where it is fairly reasonable to assume that the skin is not of the cleanest—and I use the term as much, if not more, in its purely surgical sense, as in its simple sanitary one—I try to sterilise, not merely the surface layers of the epithelium, but the deeper parts of the skin, as well as the subcutaneous tissues and underlying structures. As has been very clearly proved, the ordinary method of preparing the skin, prior to operation, by fluids, does no more than affect the surface of the body; the sweat glands, hair follicles, sebaceous glands, and deep lymphatics remain septic and ready to infect the stitches when applied. In order to get at these deeper lying microbes, I now use an inunction of oleate of mercury in lanoline, 20 per cent. This is well rubbed in, and kept constantly applied for forty-eight hours before the time of operation. It occasionally, although rarely, happens that a skin is met with which cannot stand the application. Most skins will not stand a longer period than forty-eight hours. Over-action shows itself by much reddening, and by the formation of a pseudo-pustular eruption, quite harmless in itself, but uncomfortable for the patient. By this procedure, coupled always with an accurate application of the edges of the wound, I believe the best possible results are to be obtained.

Another practical point to which I attach considerable importance is the nursing of these particular cases, and more especially those of operations upon the gastro-intestinal canal. To secure rest and sleep within the first forty-eight hours is, in my estimation, half the battle. To attain this, the patient, after the operation, must be taken to a room apart from the general ward, and receive the exclusive attention of a "special" nurse. To both the Superintendent of the Infirmary, Dr. Macgregor, and to the Matron, Miss Macfarlane, I am indebted for the opportunity of being able to carry out these important

details. If my gratitude to Dr. Grant Andrew and my assistants deserves public recognition, as I think it unquestionably does, they will be the first to join with me in agreeing that equally I should express my indebtedness to my two sisters and my "special" nurses, without whose constant and careful attention we could never hope to gain that ultimate success which the operation in all its aspects might otherwise lead us to hope for.

[At the conclusion of the address several cases were exhibited illustrative of some of the diseases and operations referred to. Among them were more than a dozen cases of operations upon the stomach, comprising one of gastro-jejunostomy, performed about five years ago for pyloric obstruction due to adhesions following upon chronic gastric ulcer. The patient, a miner, was in robust health, actively engaged in his work, and with not a symptom referable either to his stomach or to any other organ. When operated upon in May, 1899, he was a chronic invalid, greatly weakened and emaciated, and unable for any active work.]

MOVABLE DISPLACEMENTS OF THE KIDNEY.

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In the issue of this *Journal* for August, 1883, my thesis for the degree of M.D., "On Malpositions of the Kidney," appeared, and since that time I have had under my care a very large number of cases of mobility of the kidney, in the majority of which an operation was performed. These cases form a very substantial basis of experience and observation, and I trust in the following pages to convey to your readers my impressions and opinions of the abnormality, as well as to submit to them a review of the whole subject in its various relations.

Movable kidney differs from most other ailments in so far as the symptoms, as a rule, do not directly point to the displaced organ. The symptoms which are caused by or are coincident with movable kidney are very various, so that no particular series can be pointed to as typical; indeed, in the great majority of cases the mobility of the kidney is discovered in making a systematic physical examination of the abdomen, often without any view of detecting

disease in the kidney. The most common complaints are abdominal pain, dyspeptic disturbance, and nervous symptoms. The affection begins, as a rule, with indefinite complaints, such as languor, tendency to be easily tired, faintness and giddiness, and, as rest generally alleviates the suffering, the patient is inclined to remain in bed. In women there is frequently general anæmia and palpitation; not infrequently their sufferings are regarded as imaginary, and they are treated as "hypochondriacs," or are called "hysterical." Their suffering may go on for years without the true cause being discovered, until, perhaps by chance, an abdominal examination is made and a loose kidney is detected.

During natural respiration the diaphragm and the abdominal muscles communicate their movements to the kidneys; this can sometimes be felt with the hand in thin persons with lax abdominal walls, but it is best seen through a nephrotomy wound, when the kidney is not only observed to move down during inspiration and up during expiration, but the outer border is seen to be tilted a little forwards.

The fixture of the kidneys is very feeble on both sides, their movements are checked by the pressure of the surrounding organs, but they are not tied down or even suspended by ligaments like the organs within the peritoneum. Considering that man moves about in the erect posture, the marvel is, not that movable kidney occurs, but that it happens so seldom, as a penalty of our higher development. It is not found in the lower animals. Movements up and down to the extent of an inch or an inch and a half may be regarded as physiological, and probably aids active circulation of blood in the organ. In women who have borne large families the fixity of the abdominal organs generally becomes impaired, and a greater degree of mobility is permitted. Movable kidney is therefore a relative term.

As a morbid condition, although known since 1581, and described carefully by Riolani in 1649, its clinical importance has not until comparatively recently been fully recognised. For a long time there was great diversity of opinion in regard to the physiological importance and therapeutic indications of displaced kidney, and more particularly when the displacement is associated with mobility of the organ. The majority of observers regarded cases where the kidneys were permanently fixed in an abnormal condition merely as anatomical curiosities of no clinical importance; but when the organ floats free in the abdomen, and gives rise to serious symptoms, it was not an uncommon occurrence to find

that the surgeon considered the life of the patient so much in danger that he did not hesitate to extirpate the kidney. In regard to the latter condition, two extreme views were held by Keppler on the one hand, and Landau on the other. The former considered that a "movable" or "floating" kidney should be excised as soon as it was detected, and regarded it as a continual source of danger to the patient; while the latter went so far as to say that death did not result from this condition, and that in no case was nephrectomy justifiable.

During the last twenty years considerable attention has been directed to the mobile displacements of the kidney, not only by reason of the serious change in the structure and function of the kidneys which they may induce, but also on account of the numerous reflex influences upon other organs engendered by the displacement.

Displacements of the kidney with mobility have been designated by various terms. To this pathological condition the older writers apply the names "dislocation of the kidney," "displacement," "ectopia," "descent," "prolapse" of the kidney, while more modern authors refer to them as "wandering kidney," "floating kidney," or "movable kidney." The condition was described by François Pedemontanus towards the end of the sixteenth century, but no special importance was attached to it by him. Riolani, nearly seventy years later, was the first to recognise its clinical importance, and in 1825 Baillie mentions several cases in which a movable tumour was discovered in the renal region in one or other side, and which had the general shape and size of a kidney, and the condition is also mentioned by Otto (1805), Meckel, and Portal. Aberle (1826) was the first to furnish a clear clinical description associated with accurate *post-mortem* records. King (1836) observed one such case, and even attempted to remove the movable mass: in this he was unsuccessful, but the woman experienced relief after the operation. Rayer (1846), in his classical work *On Diseases of the Kidney*, describes several cases, and Dietl (1864) followed with an estimate of the frequency of the condition, and also a description of the clinical phenomena. The first systematic treatise on the pathology and treatment of the condition was published by Rollet in 1866, and in more recent times Durham, Trousseau (1865), Fourrier (1875), Keppler (1879), Landau (1884), and the author (1888), record a considerable number of cases.

In presenting the subject to your readers I shall, in the first instance, refer to the general anatomy of the kidney as far as it has a bearing upon the abnormalities we are considering.

and especially with reference to the natural movement of the kidney, and the means whereby excessive movements of the organ are restrained, and when this has been done I shall discuss the morbid anatomy, etiology, pathogenesis, progress, symptoms, physical signs, diagnosis, and prognosis. Under the latter heading the subject will be considered in its relationship to the general health, to secondary changes in the kidney, and to dangers to life. Treatment will then be discussed, palliative and operative, and the latter with special reference to the effects of nephrorrhaphy in improving the general health, in relieving pain, morbid nervous phenomena, digestive disturbance, and urinary troubles, and rules will be laid down as to the desirability of operating, and the conditions which justify it.

Anatomy.—Before proceeding to describe the morbid conditions of the kidney now under consideration it may be of advantage to refer to the general anatomy of the organs, and to the relationships which they bear to other important structures. The measurements of the kidney may be stated as 4 inches in length, $2\frac{1}{2}$ inches in breadth, and $1\frac{1}{4}$ inch in thickness. The left kidney is generally longer and narrower and thinner than the right. The shape of the kidney varies greatly in individuals, and also according to age. The normal foetal kidney is distinctly lobulated, and this condition not infrequently persists in a minor degree in adult life, the surface of the organ being more or less deeply fissured and divided into distinct portions. The surface of the living normal kidney is of a greyish-red colour, but the exact appearance depends upon the quantity and the character of the blood contained in the organ. During life the colour is brighter red and more uniform than after death. *Post-mortem*, the changes in colour are rapid, and depend, even in the healthy organ, upon the cause of death.

The kidneys are convex on the upper, outer, and lower margins, and on their inner border they have a short abrupt concavity or notch—the hilum—into which the renal arteries enter, and through which the viens and ureter pass out. In consistency the kidneys are firm and elastic, but the parenchyma is brittle and easily torn. The anterior surface, while more round than the posterior, is somewhat like a greatly flattened wedge. Frequently a prominence or rounded ridge extends across the anterior aspect, from which the surface slowly falls away obliquely, forming two indistinct planes. On the upper plane of the left kidney rests the stomach, the spleen, and the

suprarenal body; on the right, the liver. The lower planes press upon the intestines (large and small), especially the duodenum, on the right side. They look slightly outwards and are partly covered by peritoneum. The posterior surface of the kidney is flattened, and is directed slightly inwards as well as backwards; it may also be marked by the pressure of the muscles when these are well developed and the adipose capsule deficient, and even the ribs and vertebræ sometimes leave impressions. The posterior surface is not covered with

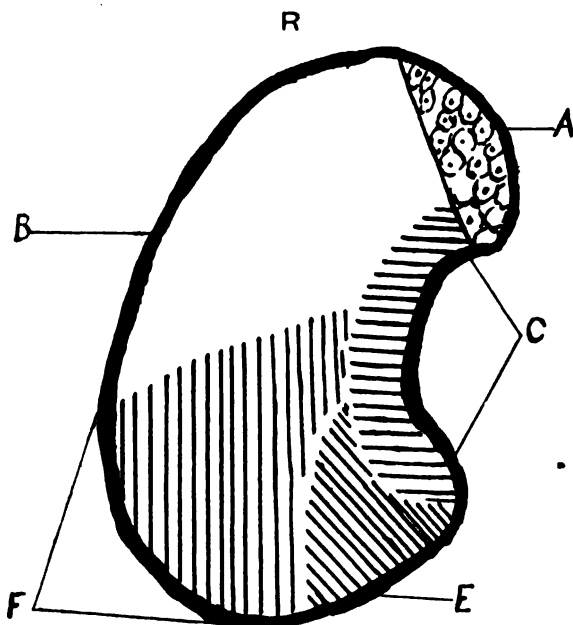


FIG. 1.

peritoneum, but rests upon the twelfth rib on the right side and the two lowermost ribs on the left; between the kidney and the transverse process of the first and second lumbar vertebræ are interposed the anterior layer of the lumbar aponeurosis, the quadratus lumborum, and the psoas muscles. Behind the kidney, but separated from it by the diaphragm, is the pleura, which descends as low as the upper surface of the twelfth dorsal vertebra and the lower margin of the eleventh rib.

In Figs. 1 and 2 (pp. 266, 267) are shown the relations of the anterior surfaces of the kidney right and left. Fig. 1 (p. 266) —*R*, right kidney; *A*, area of suprarenal body; *B*, area of liver; *C*, area of duodenum; *E*, area of small intestine; *F*, area of colon. Fig. 2—*L*, left kidney; *A*, area of suprarenal capsule; *G*, area of stomach; *H*, area of spleen; *K*, area of pancreas; *L*, area of small intestine; *M*, area of colon; *N*, area of splenic artery.

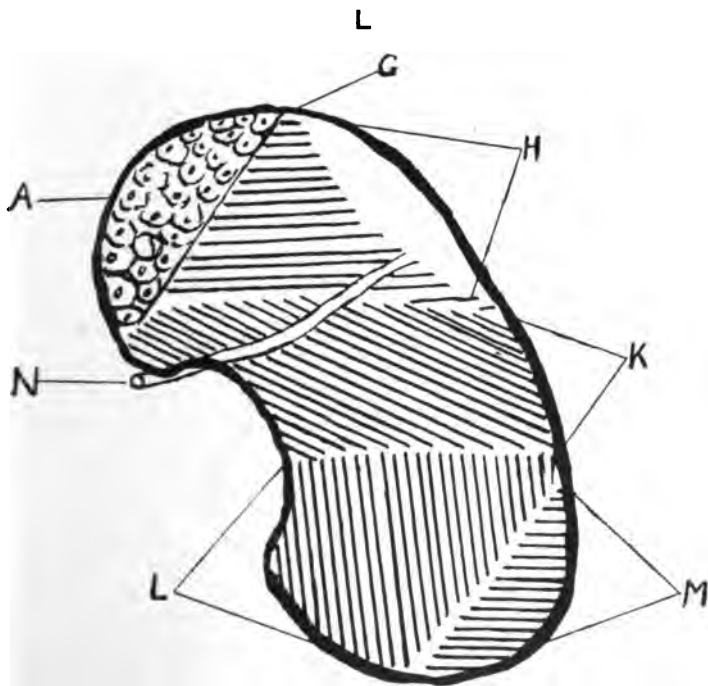


FIG. 2.

It is to be observed, therefore, that the kidney does not lie directly in the vertical plane of the body, but the outer border of the kidney is rotated slightly backwards, so that the anterior aspect looks outwards as well as forwards; nor is the short axis of the kidney parallel with the horizontal axis of the body. The upper end of the kidneys, but especially that of the right organ, is rotated towards the vertebral column, and, as a consequence, the hilum looks slightly downwards as

well as inwards. The hilum is about an inch and a half from the middle line of the body, and the external border about two and a half inches farther out. To the surgeon, the structures which enter the hilum of the kidney are of considerable importance, as they form practically the pedicle in cases of nephrectomy, and their relationship is of moment in all operations on the kidney—they are the renal arteries, the veins and the ureters, the nerves and the lymphatics. The vascular supply to the kidney is very abundant, the arteries being large in proportion to the size of the organ. The right artery is longer than the left. Both arise from the aorta about the same level; the right artery passes behind the vena cava, and just before entering the hilum it traverses between the ureter and the renal veins before breaking up into three, four, or five branches, to be distributed to the substance of the kidney. The primary branches of the renal veins are usually four or five in number; they escape from the hilum of the kidney, and ultimately form a single renal vein, which lies in front of the renal artery and ends in the inferior vena cava. The left vein is usually a little higher up, and, having to cross the middle line in front of the aorta, it is longer than the right vein. In its course it receives blood from the left spermatic vein, the left inferior phrenic vein, and from the veins of the suprarenal capsule. Although the kidney is very vascular it does not bleed very freely, except immediately after incision or puncture. This is explained by the fact that the vessels are almost devoid of anastomosing connections, each division having only a distal communication with its fellows. It, like the lungs, heart, and spleen, is supplied by what Cohnheim called end-arteries; this fact has an important bearing, not only on the question of hæmorrhage during operations, but also upon all embolic lesions, especially the infective infiltrations of tuberculous and septic diseases.

The nerves of the kidney are small in size, but their connections are widespread and are derived directly from the renal plexus formed by filaments of the solar plexus, the outer part of the semilunar ganglion, and the aortic plexus; they are also joined by filaments from the lesser splanchnic nerve. From the renal plexus some filaments pass to the spermatic plexus and ureter. The nerves have numerous ganglia developed upon them, and they contain filaments both from the sympathetic and cerebro-spinal systems. They may be traced accompanying the renal arteries as far as their final ramifications, but the ultimate nerve endings have not been traced, so it is uncertain how they terminate; the circumstance

that the nerves from the solar plexus form a dense network of ganglia and anastomosing filaments going to form the phrenic, coeliac, gastric, hepatic, splenic, superior mesenteric, spermatic, and inferior mesenteric plexuses, as well as the renal plexus, explains the many reflex symptoms met with in renal disease, or where the organ is enlarged or displaced.

If the ureter is traced upwards to the kidney it will be seen to expand as it enters the fissure into a funnel-shaped dilatation, which, however, loses the cylindrical form. As viewed externally, the pelvis appears as if it were a single sac, but if a section is made of the cortex, and the parenchyma removed without opening into the cavity of the kidney, the pelvis as it enters the sinus will be found to divide into two or three primary branches, which in turn also subdivide and end in short truncated but wide branches: these are the calices infundibula which receive the papillæ into their outspread mouths.

The coverings of the kidney are the outer capsule or tunica adiposa, and the inner or tunica fibrosa. These coverings will be found to be of considerable importance when we come to consider the question as to how the kidneys are retained in their normal position. I shall, therefore, describe them in detail, so that when we come to discuss the pathological anatomy and etiology of movable kidney the various points will be easily understood by your readers.

The adipose capsule is derived from the lamina fibrosa of the fascia propria peritonei, and is composed of loose tissue, which on reaching the kidney divides into two layers and contains a variable quantity of fat. These two layers divide, one passing in front of the kidney, between it and the peritoneum, to which it is united; the other, extending behind the pelvis and vessels, is in close contact with the posterior surface of the kidney, contributes largely to the fixation of the organ, and has been termed by Bartholin the "*ligamentum suspensorium renis*." The perirenal fascia has an anterior and a posterior lamella, and these join to be inserted into the diaphragm. Fat is deposited both in front of and behind the posterior lamella. According to Zuckerkandl the perirenal fascia is strengthened on the left side by numerous bands, remnants of the primitive fusion of the descending colon and the parietal peritoneum. Owing to the difference in the relationship of the colon, on the right side this additional support is wanting. The perirenal fat differs in colour and density from that found elsewhere, it is of a finer texture and a bright yellow colour, and so can be easily distinguished from

the subperitoneal fat. As a rule, the adipose capsule is most abundant close to the hilum or on its posterior aspect. Through the mass of fat distinct strands of fibrous tissue pass between the fibrous capsule and the perirenal fascia, but according to Delitzin and Wolkow they are not strong enough to give much support to the kidney; the bands seem simply to act as stays to maintain the organ in its relative position. When the upper strands are lengthened or wanting, the kidney falls forwards, and the upper segment is flexed upon the lower, producing a condition described by Potain under the name "anteversion of the kidney." While in the normal kidney these bands are with difficulty recognised, and their physiological importance may be questioned, in many cases of movable kidney the bands are very distinct; the question may, however, be raised whether the bands seen under such circumstances are normal or due to the stretching of the adipose capsule.

The fibrous capsule is formed of thin connective tissue which firmly and closely surrounds the kidney. The thickness of this capsule varies greatly, in some instances it is as thin as peritoneum, easily torn, and gives a very insecure fixture for sutures; while in other instances it is strong and firm, and is not easily torn. It possesses a certain degree of elasticity, so as to permit some stretching or shrinking, according to the vascular condition of the organ; it can, under normal conditions, be readily separated from the cortex, to which it is united only by minute processes of connective tissue and by small blood-vessels; in disease, however, the fibrous capsule may become considerably thickened and firmly adherent; the external layer is composed almost entirely of connective tissue, but the deeper or cortical layer contains some unstriated muscular fibres. From the surface the capsule follows the hilum, and passing inwards becomes continued along the bases of the pyramids with the strong external fibrous and elastic tissue of the calices and pelvis.

The kidneys, situated behind the peritoneum, one in each lumbar region, are embedded in capsules of fat, and are retained in position by the vessels which pass to and from them. The right kidney is generally situated a little lower than the left, probably as a consequence of the vicinity of the large right lobe of the liver. The kidneys are placed on either side of the vertebral column, about the level of the last dorsal and upper two lumbar vertebræ. The position of the kidneys, however, is very liable to variation, both in health and in disease, and also according to the conformation of the

skeleton. Perhaps no organs in the body vary more in their position than the kidneys. Their relative distance from the spine, or their position in relation to other organs, is observed to vary considerably. For instance, without any evident cause, one may be found close up to the spleen, almost touching the diaphragm and vertebral column, while the other organ is situated considerably below the crest of the ileum, and removed some distance from the spine. From observations made regarding this point, it seems clear that malposition of the kidney, within certain limits, is of frequent occurrence, and may exist without causing any disturbance. In 1,000 *post-mortem* examinations, 24 cases occurred where the position of one or both kidneys might be described as abnormal.

It is also observed that in many cases the posterior surface of the kidney is placed against the crura of the diaphragm, so that in such cases more than a half of the kidney lies, during full expiration, above the level of the lowermost limits of the pleura, so that during a deep inspiration the organ must necessarily be depressed through the action of the diaphragm. The lowermost limit of the pleura is on a level with the lower surface of the twelfth dorsal vertebra and the lower edge of the eleventh rib, and the anterior and lower surface of the posterior segment of the diaphragm rests upon the posterior and upper surfaces of the kidney, so that during deep expiration the kidneys, being pressed up, the margin of the lung is interposed between the surface of the body and the upper part of the kidney. This part of the lower margin of the pleura is practically a fixed line, and the degree to which the lung overlaps the kidney depends upon its position and its movements during respiration. The posterior surface of the kidney is also in close proximity to the quadratus lumborum muscle.

As a rule, the pelvis of the right kidney is situated on a level with the first lumbar vertebra or immediately in front of the lowermost limit of the last rib, while the pelvis of the left kidney is about an inch or an inch and a half higher up. Fig. 3 (p. 272), shows the position of the kidneys in relation to the parts in the abdomen posterior to the peritoneum. It represents the lumbar vertebræ and the sacrum removed, exposing the posterior aspect of the peritoneum. In the middle line is shown the aorta and the vena cava, giving off the renal arteries, and receiving the renal veins. Posterior to the blood-vessels the pelves are shown, that of the left kidney being only freed from its surrounding fat, while that of the right kidney has been dissected out, so as to show the branching calices. The position is that in which the kidneys are

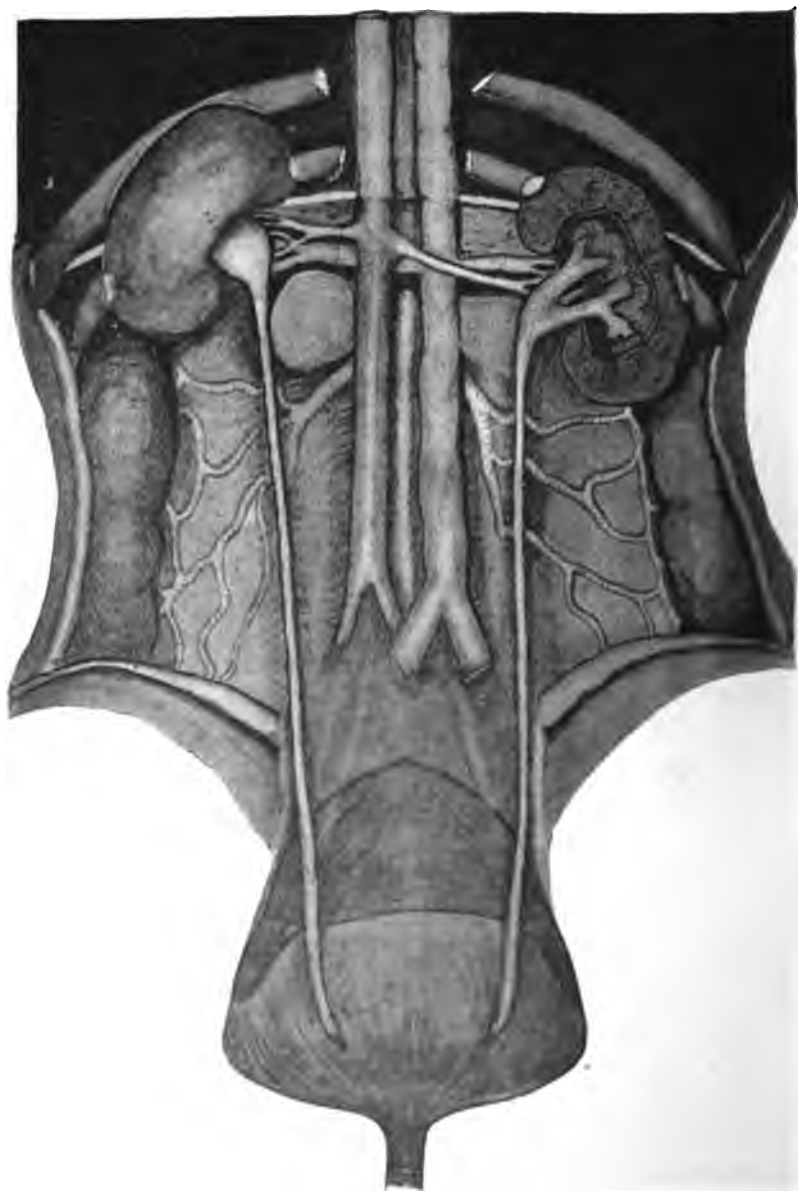


FIG. 3.

usually found during full inspiration. Fig. 3 (p. 272) also shows the relative position of the ascending and descending colon, and the position of the ureters as they traverse from the kidney to the base of the bladder. Fig. 4 represents the transverse section of the body at the level of the second lumbar vertebra: the right kidney has in front of it the duodenum, and the ascending colon lies in juxtaposition to its outer margin, and the top of the kidney lies against the under surface of the liver. The left kidney touches the peritoneum just under the fundus of the stomach; in front of it, and nearer the middle line, lies the tail of the pancreas; against its

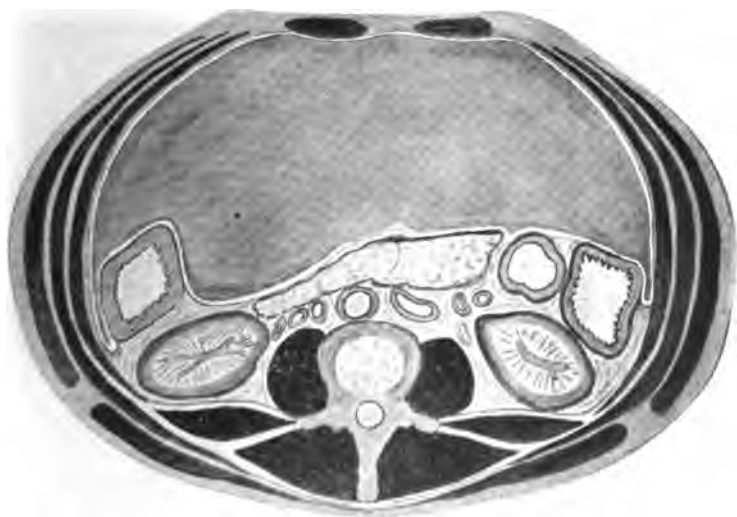


FIG. 4.

anterior and outer aspect the first part of the descending colon passes on, and on the upper two-thirds of its external border is in close relationship to the spleen.

The question may be asked, how are the kidneys retained in their position?

The first anatomical structures which suggest themselves are the renal vessels and the ureter. These structures prevent the kidney from moving away from the middle line, but they permit it to pass upwards, downwards, and forwards, while its descent inwards and downwards is opposed by the mesocolon. According to Landau, this last mentioned attachment is more

efficient upon the left than upon the right side. It must also be remembered that the kidneys are protected from pressure by the bony cavity of the thorax, by the spinal column, and by the large bones of the pelvis. But while these anatomical factors may be mentioned, there is one already alluded to of much greater importance, namely, the adipose capsule. While, it is true, that the fatty capsule serves to maintain the kidney in the normal position, a few cases have come under my observation where adipose tissue was entirely absent, and still the movements were not excessive. When corpulent persons emaciate rapidly, this capsule becomes very loose from absorption of adipose tissue, and its attachments to the kidney on the one hand, and to the surrounding parts on the other, become less firm than normal, and so may favour any tendency to undue movability. During health this adipose capsule permits of a certain amount of movement beyond that due to respiration; for instance, when the body comes to the ground with violence, the capsules yield to a limited extent, and immediately regain their former condition. The natural movements communicated to the kidney are very evident when the organ is exposed by an incision in the loin, and often amount to 4 or 6 centimetres. But, while it is depressed during inspiration, during expiration the kidney follows the ascent of the diaphragm, unless it is unduly loose, as in movable kidney or when enlarged, then the abnormal movement can be detected by the hand. Even under normal conditions the movement may be appreciated by bimanual examination in lean persons, whose costal walls are not too long or deep. As a rule, the movement is not so free in man as in woman, and this is accounted for by Deletzine and Volkoff (*Méd. Mod.*, 10th March, 1897), who show in the latter, that while its width at the inferior part is greater, the renal fossa is not so deep as in man.

When the abdomen is opened in a living animal, or in operating for disease, the viscera are pushed forward through the wound. This is partly due to contraction of the abdominal muscles, and partly to the expansion of gas within the hollow viscera. But the fact that the expansion of gas takes place is a demonstration that the intestinal gases are subjected to greater pressure than that of the atmospheric air. This pressure must necessarily vary during the different periods of respiration, but putting aside the slight variations that must occur, we may describe this physical condition under the term of intra-abdominal pressure. By reason of this force the

walls of the abdomen tend to retain the abdominal organs in position. If the abdomen be opened and the body raised erect, the liver and kidneys fall perceptibly on account of their support being removed. The abdominal organs are very loosely bound to the parietes, and their limiting structures or capsules are easily distended, either by an alteration in the vascular condition of the organ, or by morbid processes. Should the support resulting from the elasticity and resistance of the abdominal walls be removed, or, what amounts to the same thing, should the contents of the abdomen be suddenly diminished in amount, as after delivery, then the suspension of the organs rests with their anatomical attachments only, and it is evident that these structures are not of themselves capable of maintaining the kidney in position. The way in which pressure is exerted against the anterior surfaces of the kidneys has been studied by D. J. Cunningham and Kendal Franks, and they show how the kidneys are held in position by the resultant of two forces, the one pressing the gland downwards and backwards, the other pressing it upwards and backwards. "These impressed districts (Figs. 1 and 2, pp. 266, 267) indicate pressure exercised on the anterior surface of the kidney in two directions, and the intervening eminence is the result of this counter-pressure. Upon the upper inclined plane of the anterior surface of the left kidney are pressed the suprarenal capsule, the stomach, and the spleen; these exercise a downward and backward pressure. Upon the anterior inclined surface of the left kidney the counter-pressure is produced by the intestine, which presses, as a rule, upwards and backwards; on the right side the upper inclined surface is occupied by the liver, while in contact with the lower inclined area is the colon. In many cases the colic or inferior sloping surface presents a high degree of obliquity." The markings just referred to are most distinctly seen in muscular subjects devoid of any superfluous fat. In those who have lax abdominal walls the markings cannot be discerned. The circumstance that the inter-abdominal pressure is sufficient to mould the form of the kidney demonstrates that the support given to the organ during life must be considerable.

THREE CASES OF OCULAR PARALYSIS.¹

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THE following three cases of ocular paralysis are, I think, of sufficient rarity and interest to warrant their publication.

CASE I.—A. T., a female child, aged 2 years and 10 months, was brought to the Glasgow Ophthalmic Institution on 16th October, 1903, with complete paralysis of the left facial nerve.

The history given was that, three weeks before, she had fallen, striking the right side of the head against a stool, and that the paralysis had developed gradually thereafter. There was no history of a running ear, and there seemed to be no syphilitic taint.

The condition was thought to be probably intracranial in origin, and the child was kept under observation. On 30th October—*i.e.*, five weeks from the time of onset—there was first noticed slight deviation inwards of the left eye, indicating paresis of the external rectus, whose nerve supply is the sixth cranial. There were detected no pupillary symptoms, and, ophthalmoscopically, the eyes were found normal. This deviation gradually increased, till the eye assumed a position indicative of complete paralysis of the muscle, and, except for slight conjunctivitis and keratitis resulting from the inability to completely close the eyelids, no further ocular symptoms have developed. With regard to general symptoms, the most noticeable has been a progressive lethargy and weakness. Previously the child would walk, but now she will not. This, however, seems to be a manifestation of weakness rather than due to inco-ordination, for under the stimulus of an outburst of temper she both stands up and moves about in her crib. During these noisy periods she is very energetic, yet, for the most part, she presents an appearance of great muscular weakness, and sometimes even of collapse. The temperature is normal, and during three weeks' residence in the Royal Infirmary, under the care of Dr. T. K. Mouro, and a week in

¹ Read at a meeting of the Glasgow Medico-Chirurgical Society held on 5th February, 1904.

the Ophthalmic Institution, no other symptoms have been noted.

The wide separation between the peripheral distributions of the sixth and seventh nerves makes it certain that a lesion involving both must be somewhere in the vicinity of their origins. The close proximity of the fibres of the seventh to the nucleus of the sixth as they wind round it on their way to the surface, renders both nerves accessible to the action of a single small lesion. They are just under the floor of the fourth ventricle, and I think the probable cause of the symptoms in this case is a neoplasm, either in the pons or in the cerebellum, pressing downwards. Its nature is most likely to be tubercular.

CASE II.—The next case is that of a boy, J. C., aged 9, who was brought to the Ophthalmic Institution on 25th September, 1903, on account of his inability to move his eyes from side to side. Up till three years ago his eyes were in no way remarkable. At that time he had, within a very short time of each other, pneumonia, whooping-cough, and measles, and it was noticed that his eyelids began to droop. Eventually it was seen that in looking about him all necessary movement was of the head, and none of the eyes. At no time was there any squint seen. A year and a half ago he was taken to Greenock Eye Infirmary, and there the ptosis was relieved by excising an elliptical piece of skin from each upper eyelid.

When first seen on 25th September, 1903, there was present slight ptosis, which was overcome when an attempt was made to look upwards. There was no appearance of squint, and binocular vision was present, as proved by means of composition pictures in the stereoscope. The eyes could be converged to a point 4 inches distant from them, but on being asked to look at an object above or below the level of the eyes, he turned the face upwards or downwards respectively, the eyeballs in each case remaining almost stationary in the orbits. Similarly, on moving a distant object from side to side there was no movement of the eyes, but if it were a near object it was seen that each eye had a range from the position of looking straight forward, inward to the position necessary to see an object 4 inches in front of the middle line. Outward movement, then, for near or distant objects was quite impossible, and if movement of the head was prevented, the eyes simply failed to fix the object. The left pupil was slightly larger than the right, but both pupils contracted during accommodation and

responded to light. The vision was normal in each eye, as were also the ophthalmoscopic appearances.

Since September there has been manifested a slight improvement, inasmuch as there is now possible a small range of lateral movement, especially to the right. Also, on attempting to look down, the eyes move slightly downwards and to the left. Testing each eye separately makes no difference in the range of movement.

There is present, then, a paralytic condition of orbital muscles, and yet, under ordinary circumstances, there is no squint. The boy says he never sees double, and the only way in which I can demonstrate any tendency to diplopia is by getting him to turn his head to one side while looking through the stereoscope. He then describes the relative position of the picture subjects as being changed. The external recti seem to be almost quite inactive; so also the superior and inferior recti, and the two obliques. On the other hand, the internal recti are practically inactive for conjugate movement, yet normally active for convergence, while the ciliary and iris muscles are, except for slight inequality of the pupils, in no way peculiar.

It is remarkable that, with so many muscles paralysed, there should be no squint manifest. That is to say, if we exclude the act of convergence, the paralysis of opposing muscles is either so regulated or so complete that parallelism of the visual axes is maintained. Again, if the external recti are paralysed, what is the force which brings the eyes from convergence out to parallelism again? For explanation, one must look to the posterior longitudinal bundle which connects each third nucleus with the opposite sixth, and also to the fact that the third nucleus is known to be divisible into different parts, the most anterior of which is concerned with the associated movements of convergence and accommodation. Now, supposing all the rest of the third nucleus to be paralysed, as well as the whole of the fourth and sixth nuclei, then it is conceivable that the regaining of parallelism may be due to a stimulus which originates in this anterior part of the third nucleus, and passes by the longitudinal bundle back to the sixth nucleus of the same side, and so down to the external rectus. On the other hand, conjugate movements are believed to originate in the sixth nuclei, and to pass to the necessary muscles by the sixth nerve of the one side and the third nerve of the other side, passing, presumably, through the posterior part of the third nucleus, which in this case is paralysed.

As to the cause of such a widespread nuclear involvement,

there are, I think, two possibilities—the one that they are inflammatory in origin, the other, that they are pressure effects. In support of the pressure theory, there is a case reported by Wernicke,¹ in which there were similar symptoms, and on *post-mortem* examination a tubercular tumour found in the pons. Yet this boy's complete freedom from any other affection, his maintenance of perfect health, and the occurrence of the symptoms during an acute febrile disease lead me to favour an inflammatory origin, a condition which, in the next case, is seen in a congenital form.

CASE III.—In the third case, which is that of a girl, aged 19, there is again a nuclear lesion, but it has been present since birth.

The patient is the youngest of a family of four, and was born at seven months, of a very drunken mother. She was a very delicate baby, had drooping eyelids, and was eight months old before she seemed to see anything. Apart from her eyes, the child, although weakly, was in all respects normal. She was of good intelligence, went to school at the usual age and was a good scholar. Except for her appearance, she has been in no way handicapped by her condition.

I saw her first on 3rd June, 1903. There was then present a marked degree of ptosis, which necessitated the tilting back of the head in order to see forwards. But, in addition, the head was turned slightly to the right, and, on raising the eyelids, it was seen that both eyes diverged from the middle line, and that the position of the head adopted was such as to allow of the left eye being used for fixation. She stated that she preferred to look with the left eye, although, on testing, the visual acuity was found to be the same in each eye, namely, $\frac{6}{12}$. A more detailed examination showed that there was little movement of the eyeballs possible, and that while the angle between the antero-posterior axes varied slightly, they never approached parallelism, nor could either eye alone be made to look straight forward. Fine rotatory nystagmus was almost constantly present.

The only movement which the right eye was capable of was slight adduction, nearly sufficient to cause it to look straight forward, and this was accompanied by very marked rotation of the eyeball round its antero-posterior axis, such a rotation as the inferior oblique causes.

The left eye, whose position of rest was one of greater divergence than that of the right, was capable only of slight

¹ *Archives of Ophthalmology*, 1903, No. 2.

abduction with a rotation round the antero-posterior axis caused by the superior oblique.

The movement of the right eye is probably the result of a combined action of the internal rectus and the inferior oblique, both of which are supplied by the third nerve; while the movement of the left eye results from the action of the superior oblique supplied by the fourth nerve.

In June last I operated on both upper eyelids by Mules'



method, which consists in subcutaneously looping up the drooped eyelids with gold wire. This has very effectually overcome the ptosis, improving the patient's appearance to a marked extent, and adding much to her comfort.

With a view to further improving her appearance I attempted, on 12th September, 1903, to advance the internal rectus of the left eye. This was quite unsuccessful, as the muscle was

found to be fibrous and brittle in consistence, and the stitches simply tore through it. It is possible, however, that the position of the eye may yet be improved by some operation specially devised.

There can be no doubt that this condition was congenital, and I think that the apparent blindness in infancy, and subsequent defective visual acuity, are entirely the result of the inability for accurate fixation, and consequent loss of training of the macular regions of the retinae. Certainly the ophthalmoscope reveals no other explanation. The motor disturbance is a widespread one, and only to be accounted for by a lesion involving almost the entire orbital nuclear area in the floor of the fourth ventricle and aqueduct of Sylvius. The right third nucleus has partly escaped, and probably most of the left fourth, also the part of the third on each side which is concerned with the iris and ciliary muscles, this last being the most anterior part of the orbital nuclear area. Such a widespread yet discriminating effect is hardly likely to be the result of pressure from a neoplasm, and when the alcoholic maternal history is remembered and the possibility of syphilis, an inflammatory origin is suggested. Such a condition is described by Wernicke as chronic polioencephalitis superior, and the commonest causes are given as alcoholism and syphilis.

In conclusion, the following quotation is given from Swanzy's article in Norris and Oliver's *System of Ophthalmology*:—

"Chronic nuclear palsy, called chronic polioencephalitis superior by Wernicke, may exist at, or appear soon after, birth or in the early years of life, and may remain *in statu quo* all through life without becoming worse, and without becoming complicated with other nerve lesions. . . . Interior ophthalmoplegia is rare here, but all six orbital muscles in each eye may be paralysed, and ptosis is the rule. . . . The ocular paralysis once established does not undergo cure." It does not seem that a complication with bulbar symptoms is to be feared.

Obituary.

JOHN FRASER ORR, M.D.

THE intimation of the death of Dr. J. Fraser Orr, on 13th March, came with more than painful surprise to his many friends. But little more than a week previously he was engaged on his usual daily round, and scarcely, indeed, had his absence been noted when his death was announced.

It is not easy to speak freely of the sterling character and amiable qualities of the late Dr. Orr without the risk of being accused of undue sentimentalism by those who were not familiar with him; but, undoubtedly, by his many intimate professional friends Dr. Orr was regarded as "one man in a thousand." Some years ago, when acting as secretary of the Glasgow Southern Medical Society—of which latterly he was senior vice-president—his official duties brought him in intimate contact with a large number of professional brethren, and by all his true gentlemanly character was recognised. Wherever he went he made friends, and throughout his short life he not only retained them as such, but increasingly grew in their esteem and affection. No man could have been more guileless than he; none more modest of his attainments and ability; none less a seeker after self-aggrandisement.

By the staff of the Victoria Infirmary—where he was dispensary surgeon—he was held in highest esteem; and only his own unassuming and self depreciating nature prevented him from personally sharing in the advanced work of that institution. By his intimate friends Dr. Orr was known as a man of wide culture and extensive literary knowledge. He was a keen lover of music, and his greatest pleasure was to hear the renowned exponents of that art; while many of his leisure hours were spent among books on music and musical composers. On this subject he would talk with enthusiasm, and the impression left on the mind of his hearer was that, had he adopted music as a profession he must rapidly have risen to the higher ranks. Possibly this natural instinct accounted for the keen sensitiveness and over-anxiety which he displayed in the exercise of his profession. He was not one of those who could, at the close of day, dismiss from their

minds the cares of their professional work. Every case was to him a source of anxious thought; but, however noble this trait of character may be in a physician, it must necessarily, when extremely developed, as it was in Dr. Orr, have a wearing influence on the constitution. Recognising this fact, and remembering that but a year ago he passed through a severe illness of a septic nature, contracted by accidental inoculation in the course of his dispensary work, and that a few months afterwards he sustained a severe shock in the sudden death of his mother, it becomes easy to understand how his system was ill prepared to withstand the attack of acute pneumonia which ended his career.

Probably by no section of the community will Dr. Orr's loss be more keenly felt than by the Southern Medical Society. There he was universally beloved and respected. Members will recall the pleasure with which, during his term of secretaryship, they listened to the reading of the minutes. Undoubtedly Dr. Orr wielded a graceful and facile pen, and many of his minutes, especially those relating to dinners, excursions, and other social functions, were really literary gems.

Born in Glasgow on 26th April, 1862, Dr. Orr received his early education first in Queen's Park Academy, and afterwards in the Glasgow Academy, under Principal Morrison. He pursued his medical studies in Glasgow University, and, after a successful curriculum, graduated M.B. and C.M. in 1885. Three years later he obtained the degree of M.D. After his graduation in 1885 he entered the Royal Infirmary as resident physician. The following year he shipped as surgeon in the *City of Carthage*, and took two voyages to India. After spending a session at the Rotunda Hospital, Dublin, and acting for a short time as assistant in Broughton-in-Furness, he started practice on his own account in Pollokshields in 1888.

Dr. Orr was unmarried, and resided with his father and brother, who have been deeply touched by the many expressions of sympathy in their bereavement which they have received from members of the profession.

J. S.

CURRENT TOPICS.

COMMEMORATION DAY IN THE UNIVERSITY.—For some time back the institution of a Commemoration Day has been engaging the thoughts of the University authorities, and it has now been decided to carry out the idea. The scheme embraces the following programme:—A short religious service, followed by an oration on some distinguished teacher or benefactor of the University; the conferring of honorary degrees; a banquet in the Bute Hall. This year the first celebration will take place on 19th April, and, as is only fitting at the present time, when the problems of physical chemistry are so much in evidence, it has been decided to commemorate Joseph Black, the lecturer on chemistry from 1756 to 1766. We need hardly remind our readers of Black's title to commemoration as the enunciator of the doctrine of latent heat, and there can be no doubt that in their selection of the orator, the authorities have made a most fitting choice in Professor Sir William Ramsay, K.C.B., LL.D. It will be within the memory of many of us that Sir William began his teaching career as a member of the staff of the University.

By such celebrations, involving as they do the gathering together of scattered sons and the keeping alive of the old traditions, the feeling between graduates and their *Alma Mater* will be kept alive, and this will undoubtedly be felt by no department more than the medical school.

ROYAL INFIRMARY: PRESENTATION TO OLD OFFICIALS.—The Annual Dinner of past and present Residents, which took place on 25th February, under the presidency of Dr. James Barr of Liverpool, was marked by an incident as pleasing as it was unusual. Mr. William Litson, janitor of the Infirmary, had lately retired after a service of twenty-five years, and Mr. Andrew Paterson, senior porter at the gate, had retired after a service of thirty-five years. These respected officials, now in advanced life, have been suitably provided for by the Managers, but the staff decided to present them in addition with a gift which should testify to the high esteem in which they were held. Accordingly, at the dinner, Professor H. E. Clark, in name of the staff, handed to Mr. Litson and Mr. Paterson cheques for considerable sums of money, and the recipients

were welcomed by the old and recent friends who were present with the heartiest acclamation.

ROYAL PHILOSOPHICAL SOCIETY OF GLASGOW.—On 9th March, Professor Robert Muir delivered the fourth of the Centenary Series of Lectures to the Society, his subject being "Some Advances in Medical Science during the Nineteenth Century." He sketched the condition of medical science at the beginning of the century, and showed how prevalent speculation and theory were at that time. During the first half of the century, advance was comparatively slow. Then came the foundation of the medical science of the present day. Virchow's great work on the cell theory marked the inauguration of the change. In this work, which appeared in 1858, Virchow established the principle, *omnis cellula e cellula*, and formulated the laws of cell genesis and growth. Pasteur's contribution to the edifice, by his study of the nature of fermentation and putrefaction (1854-65), was next taken up by the lecturer, who described the conclusion established by Pasteur with regard to micro-organisms as the counterpart of Virchow's with regard to the cells of the body. Lister applied (1867) the principles thus laid down by Pasteur, and established antiseptic surgery, the foundation of which was the preventing the access of micro-organisms to the tissues, or the destroying of them after they had reached the tissues. Professor Muir then traced the antiseptic system through its various stages, which culminated in the "aseptic" system so much in vogue at present, and in which the object is to reduce to a minimum the action of chemical antiseptics on healthy tissues. This principle was early grasped and enunciated by Lister.

While the antiseptic system was developing, the relation of micro-organisms to special diseases was being worked out. Pasteur worked at diseases of silkworms (1865-69), and Koch cultivated the bacillus of anthrax (1876). Koch introduced new methods, and thereafter bacteriology advanced with rapid strides. In the period 1880-90, most of the pathogenic bacteria were discovered, *e.g.*, tubercle, cholera, typhoid, diphtheria, &c. Later events were the discovery of the plague bacillus (1894); the establishment of the mosquito phase in the cycle of the parasite of malaria by Ross in 1898; and the recent study of yellow fever by the American Army Commission. Preventive inoculation was next described, and also toxins and antitoxins and serum therapy. The lecturer concluded by drawing attention to "invisible micro-organisms" believed to exist, but so far not definitely identified.

The lecture was illustrated by a large number of lantern slides, by tube cultures, and by various pieces of apparatus used in bacteriological work.

Dr. Muir was listened to with profound attention by an appreciative audience, and a vote of thanks, proposed by Dr. Yellowlees and seconded by Professor Glaister, was cordially awarded to the lecturer, who briefly replied.

NEW PREPARATIONS, &c.

ANTIPHLOGISTINE (Denver Chemical Mfg. Co. London: 110 Cheapside, E.C.).—This preparation was introduced in 1893, and is intended to take the place of the old-fashioned poultice. It is non-irritating, non-toxic, antiseptic, stimulating, anodyne, and apparently hygroscopic. It is a combination of glycerin, boric acid, salicylic acid, carbonate of iron, peppermint, gaultheria, eucalyptus and iodine, with the dehydrated silicate of aluminium and magnesium as base. Antiphlogistine is supplied in hermetically sealed tins, and after being warmed, is spread like a thick layer of butter over the seat of disease or pain. It is then covered with cheese-cloth or absorbent cotton and a bandage or compress, and the whole can be stripped off after twelve or twenty-four hours. Antiphlogistine may be used to relieve the pain of such affections as pneumonia, pleurisy, phlebitis and mastitis, and may be applied as an antiseptic to open wounds. We have obtained very encouraging results from the use of this preparation, and have felt justified in recommending it in private consulting practice.

APOLLINARIS WATER (The Apollinaris Co., Ltd., 4 Stratford Place, Oxford Street, London, W.).—Those who delight in natural mineral waters will doubtless view with satisfaction the decision of the High Court of Justice that Apollinaris is fully entitled to rank among these waters. The water and the gas it contains are both derived from the spring. The taste of the water in bottle is the same as that of the water in the spring. The composition of the water differs from that of the spring in two respects. In the first place, some useless oxide of iron separates from it before bottling; and, in the second place, a small quantity of sodium chloride is added to that normally present, so as to prevent any decomposition of the sodium sulphate with liberation of sulphuretted hydrogen, which would spoil the taste. Though thirty million bottles are filled every year at this spring, it shows no signs of exhaustion.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1903-1904.

MEETING III.—6TH NOVEMBER, 1903.

The President, DR. DAVID NEWMAN, in the Chair.

I.—A BOY, AGED 11, WHO WAS LATELY TREATED ON ACCOUNT OF
A LARGE IDIOPATHIC POPLITEAL ANEURYSM.

By SIR HECTOR C. CAMERON.

R. J., æt. 11 years, was admitted to the Western Infirmary on 17th April, 1903, with a swelling in right popliteal space, which was first noticed about one month previous to admission, and it had not apparently increased in size since that time. There was no history of injury. The swelling was especially marked over the upper part of the popliteal space. It was pulsatile and expansile, and a soft systolic murmur was heard over it. The pulse in the right tibial arteries was small and delayed. The leg was in the position of semiflexion, and could not be straightened. He had an almost complete paralysis of the right peronei muscles, so that he walked as one who suffered from an infantile paralysis. The foot and leg were œdematous. He suffered severely from pain at the seat of swelling as well as in the leg and foot, and he was often restless and sleepless at nights on this account.

On 23rd April the femoral artery was ligatured at the apex of Scarpa's triangle by a triple ligature of very fine catgut. He made an uninterrupted recovery. From the time he recovered from chloroform all pain ceased, and the cedema disappeared in a few days. The aneurysm consolidated, but took a long time to become absorbed.

He is now well in all respects, and no trace of the tumour can be felt. The flexion of the knee, which was slow to yield, has now quite gone, and full movement of the joint is now established. He still walks with a slight drag of his right foot, but this symptom (paralysis of the peronei) has greatly improved.

In the course of his remarks on the case, Sir Hector Cameron referred to one by the late Mr. Syme in his

Contributions to the Practice and Pathology of Surgery, in which aneurysm had occurred in a still younger patient.

Dr. Kennedy said he was much interested in this case. It was seldom that an aneurysm occurred in one so young. He had shown a case of an aneurysm of the axillary artery in a boy of 14 years. He saw the artery, and it was free from disease; but there was a history of very slight injury—he had slept with his arm hanging over a chair. Paralysis was present at a very early date.

Sir Hector Cameron replied.

II.—AN UNUSUALLY LARGE RENAL CALCULUS REMOVED BY OPERATION.

BY SIR HECTOR C. CAMERON.

R. A., æt. 34, was admitted to the Western Infirmary on 23rd April, 1903, complaining of pain on right side. The pain began seven years ago. It was not constant, but occurred in paroxysms. It was not confined to the kidney region, but radiated towards the back and groin. The paroxysms gradually increased in severity, and he was very ill on admission. Five years ago he was ill for eight weeks. The urine throughout the whole illness contained pus, but the patient never noticed any blood in it.

On admission, the kidney was felt to be distinctly enlarged, and there was tenderness on palpating the right flank. The urine-glass often had a deposit of pus extending up at least one quarter of the column. No blood was detected.

A search was made for tubercle bacilli, but with a negative result.

The stone was removed through a lumbar incision. It is very large, and weighs over 3 oz. The kidney substance was found to be not much destroyed. A quantity of foul-smelling pus escaped from the kidney when it was opened into. Urine escaped from the wound for the first few days after the operation. The wound gradually closed up, and is now perfectly healed. The patient is now very well, although he states there is still a sediment in the urine.

Dr. Lindsay Steven remarked that he had frequently found large calculi in kidneys, at *post-mortem* examinations, in cases where there were few symptoms during life.

Dr. Newman said he was very much interested in this case. The calculus, being a large one, was probably fixed, and he

quite agreed with Sir Hector that this immobility might account for the absence of blood in the urine.

Sir Hector Cameron replied.

III.—PATIENT WHOSE TIBIAL SPINE HAS BEEN SUTURED AFTER AVULSION.

BY MR. J. H. PRINGLE.

A patient who had been admitted to the Royal Infirmary at the beginning of June, 1903, three days after receiving a blow on the outer aspect of the left knee-joint from the shaft of a cart. The joint was fully distended by blood, and permitted an extreme degree of abduction of the tibia on the femur. It was found on operation that the anterior crucial ligament, along with the greater portion of the tibial spine, had been torn out from the head of the tibia; it was sutured into position. The patient has now almost full flexion of the joint, and, although a certain degree of abduction is still possible, this is very markedly less than before operation. He is able to get about freely.

IV.—THREE PATIENTS TO ILLUSTRATE THE RESULTS OF BIER'S OSTEOPLASTIC AMPUTATION.

BY MR. J. H. PRINGLE.

Two of these patients have had amputation of lower limb through the shaft of the femur, and the third through the shaft of the tibia. Each of them is able to bear the full weight of the body on the face of the stump, a result which, prior to the methods of Professor Bier being introduced, has been practically impossible in cases where amputation was required through the shaft of the long bones.

MEETING IV.—20TH NOVEMBER, 1903.

The President, DR. DAVID NEWMAN, in the Chair.

I.—TWO CASES OF COXA VARA.

BY DR. STOCKMAN AND DR. D. J. MACKINTOSH.

CASE I.—A lad, aged 17, a farm-servant, was admitted to the Western Infirmary in June, 1903, complaining of lameness

of about one year's duration. The lameness was referred to both hips, and he stated that the left hip-joint began to be stiff in May, the right in September, 1902. He is otherwise healthy, and can assign no cause for his lameness. In walking, the right foot is everted to a right angle, and he can only place the anterior part of his left foot on the ground; he cannot bring his left foot past his right, and his gait is thus hobbling in character. He lies in bed, or sits with his legs crossed, the right over the left. Abduction of the thighs is impossible, as he has very limited movement at both hip-joints. He can scarcely flex the left thigh on the abdomen, and in flexing the right it is noticed that this is chiefly done by the sartorius muscle, which is very much hypertrophied, and in flexing the thigh everts the whole limb, the foot being past a right angle.

The left great trochanter is very prominent, the right less so, and both are above Nelaton's line. Both femora are inclined inwards, the left limb is half an inch longer than the right, and there is marked knock-knee.

CASE II.—The second patient is also a farm-servant, aged 17 years. His difficulty in walking began a year ago, first in the left leg and a little later in the right. He walks with a "scissors" gait, and lies in bed with both feet everted or with his legs crossed. Abduction of the thighs is much limited, and flexion of them on the abdomen is also abnormally small. He has knock-knee, and both femora are greatly sloped inwards. The right leg is half an inch longer than the left. Four months later his gait had altered, and exactly resembled that of the first case.

Skiagrams were taken showing that the changes were confined to the neck of the femur and hip-joint. The characteristic gait was demonstrated by means of the cinematograph.

II.—AN INFANT WHO HAD SYMPTOMS OF SUFFOCATION CAUSED BY A PIECE OF COAL LODGED IN THE TRACHEA: OPERATION: RECOVERY.

SHOWN BY DR. WALKER DOWNIE.

On 11th November, 1903, an infant boy, aged 15 months, was left to play in the kitchen while his mother did some work in the wash-house. When his mother returned she

found him sitting on the floor near to the fireplace. He was crying and gasping for breath, with the fingers of both hands in his mouth.

The mother concluded that the child had put some of the cinders which were lying on the hearth in his mouth, and that possibly he had swallowed some. During the rest of the day the child was very fretful, had considerable difficulty in breathing, would take no food, and frequently cried as if suffering pain. Throughout the night and the following day there was a steady increase in the difficulty of breathing. When the doctor was called he found the child suffering from what he considered to be laryngeal obstruction, and without delay had the child sent from the country to the Western Infirmary as an urgent case.

The child was admitted late in the evening of 12th November, and was seen by me about 10 P.M. He was then pale and exhausted, and, while suffering from severe dyspnoea, had no hoarseness—his cry was perfectly clear.

The pulse was 148 per minute, the respirations 64 per minute, and the temperature, which was taken with difficulty on account of his struggles for breath, was 100·4° F.

The marked indrawing of the intercostals and the epigastrium was an index to the serious nature of the obstructive difficulty present.

By auscultation, it was found that the amount of air entering the lungs was greatly deficient, that both sides were equally affected, and that the respiratory murmur, particularly towards the bases, was accompanied by mucous râles.

The cause of the obstruction to the entrance of air was evidently in the trachea, and probably was well down in that tube. An examination by the *x*-rays gave no sign of the lodgment of a foreign body.

For the removal of the foreign body, the presence of which was indicated by the history and the symptoms, inversion was first tried, but without benefit. The child was then placed under chloroform. The larynx was inspected with the laryngoscope and found to be normal, after which tracheotomy was performed. When the tracheal cartilages were split, and the edges of the incision held apart, a black object, lying transversely and firmly fixed within the trachea, was seen at the level of the fourth ring. This was grasped with forceps and removed, and it was found to be a piece of coal, measuring half an inch long by three-sixteenths of an inch broad and one-eighth of an inch thick. A tube was inserted, lest any fragments might have been broken off and retained.

As soon as the piece of coal was removed the child breathed with freedom, the chest expanded fully, and the child was asleep shortly after. Later, he again became restless, and his temperature at 4 A.M. was 101.8° F., his respirations 58, and his pulse 144 per minute.

At 8 A.M. on the 13th, temperature was 100.6° F., respirations 46, pulse 136, and at 10 A.M. the tube was removed.

From this time there was a gradual but steady improvement, and on Sunday, the 15th, the evening temperature was 98.4° F., respirations 28, and pulse 124. The child is now well, and the wound healed.

III.—DEMONSTRATION OF ACID-FAST BACTERIA BY MEANS OF CULTURES AND MICROSCOPIC PREPARATIONS.

BY PROFESSOR ROBERT MUIR.

Professor Muir pointed out that the organisms which possessed the acid-fast property might be conveniently divided into three groups, viz., (1) the varieties of tubercle bacilli; (2) other acid-fast bacilli widely distributed in nature; (3) acid-fast streptothrix forms, allied to the actinomyces.

1. In the case of the first group, we have an interesting example of different modifications in the tissues of different animals. With regard to mammalian tubercle bacilli, he considered that there were probably a number of varieties, but that the differences between these were of a transitory character; so that, although the bovine variety shows differences in cultural characters, and especially in virulence, from the human variety, it may still become a pathogenetic agent to the human subject. The differences between the bacilli of avian and mammalian tuberculosis are more distinct, so that the former probably do not, under natural conditions, come to infect mammals. There was for a time much dispute as to whether they ought to be regarded as separate species, but the transformation of the one into the other had been effected by Nocard, who placed tubercle bacilli of human origin in small collodion sacs in the peritoneal cavity of the fowl, and found that after a time they gradually assumed the characters of the avian variety. In the case of the interesting variety—that of fish tuberculosis—discovered by Bataillon, Dubard, and Terre, the differences from the mammalian variety are of a more marked character still. This bacillus grows well at a warm room temperature, but does *not* grow at the

temperature of the human body, and, so far, it has not been found possible to make it assume the characters of the mammalian variety. As regards conditions of growth, it may, therefore, be considered to correspond with a supposed original saphrophytic type.

2. He referred to the now considerable number of acid-fast bacilli which had been cultivated from sources outside the body—the grass bacilli of Moeller, the butter bacillus of Petri and Rabinowitch, Korn's, Marpmann's, and Coggi's bacilli, the varieties of smegma bacilli. These organisms, along with the tubercle bacilli, form a group which have not only a common staining reaction, but agree in their growing under certain conditions in filamentous form, and even presenting branching of the filaments. This group, to which the term *mycobacteria* is often applied, occupies a position intermediate between the ordinary lower bacteria and the higher streptothrix forms. The significance of these recently ascertained facts was discussed in relation to diagnosis, and it was pointed out that an important circumstance in connection with the microscopic diagnosis was whether or not the material containing the acid-fast bacilli came from the interior of the body or from a source outside. In the latter case the microscopic test alone must be regarded as quite inconclusive.

3. A number of acid-fast streptothrices have now been recognised, *e.g.*, those of Eppinger, Birt and Leishman, Stuart McDonald, and others. What was formerly known as *actinomyces* really represents a group of species, several of which are pathogenic to the human subject, the lesions varying in character from suppurations to granulation-tissue growths.

In conclusion, the possible evolution of these different acid-fast organisms was briefly discussed.

IV.—DR. M. LOGAN TAYLOR gave a lantern demonstration on malaria, with special reference to the life-history of the malarial parasite.

V.—DR. JOHN M. COWAN showed a series of photographic slides illustrating the various forms of fatty and fibroid degeneration of the myocardium, and their etiology.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1903-1904.MEETING III (*continued*).—16TH DECEMBER, 1903.

*The President, DR. J. NIGEL STARK, in the Chair.*II.—ON THE MANAGEMENT OF ANTERIOR AND POSTERIOR
DISPLACEMENTS OF THE UTERUS.

BY DR. G. SCOTT MACGREGOR.

In bringing before this Society the management of anterior and posterior displacements, my remarks merely embody what I have found in my own experience to be the most lasting and the most successful methods of treatment.

I am quite aware of the responsibility incurred in venturing to lay down definite lines of treatment, for no subject in gynæcology lends itself to a greater diversity of opinion than the treatment of such cases. It was no didactic spirit that led me to bring the subject so prominently under review, but rather as a reminder of what we all more or less already know, but have allowed to fall into the background in the hurry and stress of general practice.

For all practical purposes, displacements may be divided into two great classes—those occurring in nulliparæ, and those occurring in parous women.

In nulliparæ, the precise causation of displacements has not been definitely ascertained, but arrested development and antecedent inflammatory conditions occurring in the annexa play a most important part in bringing about the existence of these dislocations. Some writers would even eliminate anterior displacements from the category of uterine disorders, and only admit a pathological antelexion when a cause was present which kept up the dislocation.

In early life, the normal antelexion of the uterus is very pronounced, and it is at the period of puberty that the body of the organ develops more decidedly and tends to become more erect; then the congestion of each menstrual epoch is attended with a distinct straightening of the utero-cervical canal. In some patients, however, such erection of the organ fails to occur, and though for a time menstruation may go on

painlessly, it is apt, in the course of months, to be attended with suffering.

The importance of such a fact in the dysmenorrhœa of young females should never be lost sight of, as when a mother seeks our advice concerning her daughter. It is now that we may be in a position to cure the tendency, and prevent, by appropriate measures, what might eventually terminate in years of menstrual discomfort, if not absolute pain.

Constipation and intra-abdominal-pressure, not to speak of many other causes, are factors which, more particularly at this time of life, play a most pernicious rôle.

I might, in passing, be permitted to say a few words concerning the symptom dysmennorrhœa. That dysmenorrhœa results from the malformation of the organ is, in the majority of instances, a fallacy, as shown by the patient remaining unrelieved in spite of all instrumental interference, and here I would enter a caveat against the use of the stem pessary—granting, at the same time, that some excellent results doubtless are obtained in the hands of an eminent gynæcologist; but its use is so beset with risks that I have no hesitation in condemning its general employment. The knowledge that such patients frequently become the subjects of salpingitis and oöphoritis is in itself enough to prevent us lightly recommending instrumental measures.

I have seen many cases where anteflexion was present and menstruation painless. As an illustration, I might give two examples where the conjunction of anteflexion with dysmenorrhœa was apparently obvious, but later events conclusively demonstrated the condition to be entirely independent of cause and effect.

Miss C., a young unmarried lady under my care, had suffered for several years from this distressing symptom. I followed out my usual routine practice, viz., systematic hot douching in the recumbent posture, given by an experienced attendant, combined with uterine tonics and sedatives, regular exercise, attention to the bowels, hot sitzbaths at about the commencement of the flux, with rest in bed for the first day. During this treatment she was distinctly benefited, but on its discontinuance the dysmenorrhœa returned as bad as ever. I was suddenly summoned one evening to see this same young lady, and discovered that she had developed an appendicitis. She was operated on, and I asked the surgeon to examine the pelvis, as I was curious to know the exact state of the uterus and its appendages. The uterus was anteflexed, and in the right side a parovarian cyst, about the size of a tangerine

orange, was discovered. This was promptly removed, and she now menstruates normally.

The other case, Mrs. C., a nullipara, had for many years suffered from this complaint; the antelexion was well marked. She had been dilated twice, curetted once, and no end of local treatment by different men. This symptom, instead of improving, had grown steadily worse. There was a right cystic ovary, and I strongly advised its removal. This was subsequently done; the left ovary was normal. She now menstruates painlessly, and quite recently was delivered of a child.

These cases tend to show that an undue pre-eminence is given to antelexion to the neglect of less apparent but more potent causes of this distressing symptom. Until, then, we have exhausted the treatment at our disposal—and I might add that it is my firm conviction a case that benefits by forcible dilatation would most certainly have yielded to less heroic measures—forcible dilatation should only be undertaken as a *dernier ressort*, in the hope that a beneficial result might follow; but how fleeting is the benefit, and how often has it utterly failed to give the desired relief, is the experience of all of us.

In retro-displacements, the same treatment holds good—hot douching in the recumbent posture, glycerine or ichthyol tampons, regulation of the bowels, uterine and constitutional tonics. The result of this treatment is the alleviation of the backache, the disappearance of the ovarian pain and other general symptoms, as described by the patient herself, and very often at this stage she declines, "or it may not be advisable," to have an instrument introduced.

An interesting case came under my care recently, where the uterus was retroflexed, and, in addition, was intimately bound down in its bed by numerous adhesions. The introduction of a pessary in this instance would most certainly have been followed by an aggravation of her symptoms, and a further increase of the mischief.

Mrs. F., æt. 24, nullipara, married two years; regular twenty-eight-day type; period, five to six days; painful menstruation throughout. Since her marriage, it had steadily got worse; dyspareunia; general health poor; highly nervous; great depression; backache; leucorrhœa; great pain on pressure over right ovary.

On *per vaginam* examination, the uterus was found to be markedly retroflexed, the right ovary about the size of a walnut, prolapsed, and exquisitely tender. I removed the

right ovary, which was cystic, and found numerous inflammatory adhesions binding down the fundus of the uterus in its abnormal site. These were carefully broken down, and the uterus replaced in its normal position, and stitched to the abdominal wall. The patient is now free of pain, and menstruates normally.

Turning now to displacements in parous women, we find in anterior displacements that mechanical causes play the most important part, such as subinvolution, tumours, the result of peri- or para-metritis, or inflammation of the utero-sacral ligaments. The symptoms of such a condition are the results not so much of the anterior dislocation itself, as the complications that give rise to or succeed the displacement.

A true knowledge of the pathology at once gives us the key to the appropriate remedies. We thus avoid striving to replace an organ by means of pessaries or other instruments as our first methods. By far the most satisfactory process, but one that will yield the most lasting results, is the preparation before proceeding to our mechanical measures; and to do this most effectively, we must improve the uterine tone, diminish the inflammatory condition, rendering the parts softer and more pliable, and less likely to set up an inflammatory reaction by the manipulation of an organ rendered irritable by disease.

By means of the douche, tampons, and uterine tonics, combined with the local treatment of the chronic endometritis, if present, such an improvement in the patient's symptoms is obtained, that the antelexion itself will become a matter of minor importance, and an instrument is entirely unnecessary.

Coming now to speak of retro-displacements, we find that, in the causation, parturition as a predisposing agent plays by far the most important rôle, while the exciting causes, although numerous, usually arise mechanically, as is most commonly observed after the puerperium, from the results of imperfect involution, dorsal decubitis, increase in weight, and too early rising. To complicate matters, its abnormal situation is greatly aggravated by a tendency to inflammatory changes, owing, doubtless, to a disturbance of the uterine circulation. This tendency is manifested by a chronic catarrh from the endometrium, which gradually spreads until it appears in the posterior lip of the cervix, or the mesometrium may become indurated from chronic inflammation, and thus further tend to keep the uterus in a state of permanent retroversion; or again, the retroflexed tumid fundus lying in the pouch of Douglas tends to set up an irritation, followed by an

inflammatory reaction, and thus ultimately becomes fixed in its abnormal position. These are some of the accompaniments, not to mention the involvement of the tubes and ovaries, in the general *débâcle*.

I have pointed out in the preceding considerations the value of the preparatory treatment, and you will realise its immense importance in those conditions I have just described, also the great assistance it gives in the ultimate replacement of an organ which at first sight seemed almost an impossibility. On the completion of this preparatory treatment, we are now in a position to treat the displacement with the best possible results.

The following methods of adjusting a retro-displacement may be mentioned:—Fix the posterior lip of the cervix, or both lips, if necessary, with a volsellum, and pull downwards and backwards, at the same time pushing the fundus of the uterus upwards and forwards. If the patient is in the genu-pectoral position, your manipulation will be greatly simplified. Lastly, it may be done by passing the sound, and using it as a lever to swing the fundus into position. This requires much greater care and skill than in the previous method, as the sound does not convey the sense of resistance in the same way as the fingers. Therefore, the careless use of the sound may be attended with untoward results. It is, however, essential that the uterus be accurately and carefully replaced, and I think that the bimanual method of reposition is the safest and most thorough in the hands of the general practitioner.

In well-marked cases of retroversion, a well-adjusted Hodge or some of its many modifications will be found to act efficiently; whereas, in the case of a well-marked retroflexion, the ordinary ring pessary will act better than the Hodge, as it is apt in such cases to get into the sulcus, between the body and the cervix, thus aggravating a condition it was intended to improve.

I have purposely avoided any mention of the surgical treatment, as it does not fall within the scope of the paper, and am perfectly aware that I have but touched the fringe of this subject.

Dr. J. K. Kelly said he had little to add, as he had fully discussed this matter in the Society on a previous occasion. He differed in many points from *Dr. Macgregor*, but agreed that the sound should not be used for replacing a retroflected uterus. He disapproved of the ring pessary in the treatment of retroflexion.

Dr. MacLennan referred to the use of the intra-uterine stem pessary in the treatment of pathological ante flexion. He had used it in private practice, and seen it used in hospital.

Dr. Balfour Marshall condemned the stem pessary as bad treatment and unscientific, whether it did harm or not. It was not the flexion but the cause which produced it that demanded treatment, as well as other existing conditions, such as endometritis. He referred to passive stretching of the utero-sacral folds, a method of treatment which had been successful in many cases. In retroflexions which were amenable to pessary treatment he always used a modified Albert Smith, specially moulded for each case from celluloid rings.

Dr. A. W. Russell also condemned the stem pessary, and said that sufficient attention was not given to operative treatment.

Dr. Macgregor shortly replied.

III.—CASE OF SARCOMA UTERI.

By DR. ALEX. MACLENNAN.

The case which I wish to report to-night is one of some interest, and involves the consideration of a number of points upon which, however, I shall merely touch.

Miss M., æt. 43, was seen by me in September of this year, in consultation with my brother, Dr. William MacLennan. The history of the case was as follows:—

The first indication of pelvic trouble made its appearance in July, but little notice was taken about the matter till the latter part of August. Previously there had been nothing to draw attention to this region, and though the patient was not robust she had enjoyed fairly good health. Pain in the sacral region, with a slight increase in the menstrual discharge, were the symptoms complained about. These gradually increased, and in August menorrhagia was sufficiently disturbing to require treatment. The usual remedies were administered, with some alleviation, but for about one week before I saw the patient, pain had been acute, while for a couple of days the discharge had been very profuse, and had necessitated vaginal packing. On examination of the abdomen it was found that the fundus reached about 2 inches above the symphysis, and was very tender. It was surmised that this enlargement of the uterus, though unsuccessfully sought for previously, must have been present for some time, but owing to the rigidity of the abdominal walls it had not been discovered.

Immediate exploration of the uterus, with removal of the probable polypus, was deemed the proper treatment; no vaginal examination was made at that time. Next morning the patient was removed to the Training Home for Nurses, and in the afternoon the uterus was explored. Dr. A. N. M'Lellan administered the anæsthetic. Bimanual examination revealed that the uterus was much enlarged (the sound passed $4\frac{1}{2}$ inches), being distended evidently by some round body within. The case being one of urgency, dilatation was carried out with Hegar's dilators to No. 24. The cervix was split by the dilators; notwithstanding this, incision had to be resorted to before the finger was able to enter the cavity, and the division of the anterior lip had to be carried up to the peritoneal reflection.

Hæmorrhage was profuse. On inserting the finger a large round polypus was found filling and distending the uterine cavity. The polypus was soft, vascular, and friable; it came away in pieces. The attachment was found to be comparatively low on the posterior and left aspect of the lower uterine segment. The uterine cavity had to be packed to stop the hæmorrhage. The patient was not then in the condition for a complete operation, nor had consent been given for a hysterectomy. From the hæmorrhage, the softness and rapidity of growth of the tumour, it was almost certainly sarcomatous. Dr. Leslie Buchanan made an examination of the pieces of the growth submitted to him, and reported that it was a spindle-celled sarcoma. He remarked upon the vascularity and the evidence of rapid growth from the frequency with which kariokinetic figures were seen in the sections.

Permission was given for hysterectomy, which was to be put off till the condition of the patient would warrant this operation. Unfortunately the symptoms returned very quickly, and further delay was deprecated as the hæmorrhage was again beginning. The patient was extremely anæmic. Six days after the exploration of the uterus the patient was anæsthetised by Dr. M'Lellan, and, assisted by my brother, I began the hysterectomy. (A large intravenous saline was given before the operation.) The vagina was carefully cleansed, and the uterine cavity stuffed with gauze. The unhealed split in the cervix was restitched. On opening the abdomen the broad ligaments were found to be completely taken up by the rapid growth of the uterus, which practically filled the pelvis. The operation was done so that the minimum of blood was lost, as the patient could not stand further loss of

blood. At the end of the operation she was much collapsed. From the first, recovery was problematical, but on the fourth night signs of recovery were present, though not very distinct. The improvement was, however, only temporary, and on the sixth day after the operation the patient died.

The question of peritonitis and hæmorrhage were carefully considered, but when friction crepitus was observed in the region of the liver there was no doubt as to the presence of peritonitis. A rapid pulse with abdominal distension had been present since the operation. Flatus was passed freely, but the bowels never moved satisfactorily. There was no *post-mortem*.

On splitting the uterus the tumour was found to be again encroaching upon the cervical canal. It involved the whole of the posterior aspect of the lower segment, and was invading the lateral walls; it was not encapsuled. A number of isolated nodules were scattered throughout the myometrium, and on section were found to be malignant. The growth had nearly penetrated the uterine wall into Douglas' pouch. The section of a small subserous nodule was shown under the microscope; it was benign. No involvement of the tube or ovaries was found. The tube was markedly atrophic.

Remarks.—Sarcoma of the uterus is very rare. The frequency, as given by various surgeons, varies very much, but this will be due to the inclusion in this category of some of the larger growths which are found in connection with myomata. I believe that this growth arose in the uterus without the preliminary production of a myoma, which is the more frequent manner.

The diagnosis of this state of affairs before the first operation would have been most useful, but the clinical picture was so definite that, though the possibility of the growth being malignant was in mind, still it was such an off-chance that it was discounted. In any case, the diagnosis of a sarcoma with or without myomata is very difficult.

With regard to metastasis, there was at least a local one, but nothing more can be said. As a rule, however, the sarcomata of the uterus are less malignant than the corresponding tumours in other regions.

Lastly, I would note the hypertrophy of the uterus as a whole. This was not due to metritis, but was in some way connected with the new formation, and I would like to indicate the view I have of this. In carcinomata the glands are more often involved, but, besides being involved

with metastatic deposits, they are also hypertrophied. It is as if some bye-product of the malignant cells were given off by the tumour, which caused the glands to enlarge, and in this case the bye-products given off were the cause, not of enlargement of the glands, but of the uterine muscle, which otherwise ought to have been in the atrophic condition of the tube.

Literature.—With regard to this item in the study of the matter I would refer the worker to the *Münchener Medicinische Wochenschrift*, 1903, p. 1414, for the most recent observations on this disease which I have come across.

IV.—A DOUBLE MONSTER: CASE OF THORACOPAGUS.

BY DR. JOHN EDGAR AND DR. JOHN LINDSAY.

Clinical Report by Dr. Edgar.—On 8th May, 1903, a medical man in the country sent for me to assist him with a difficult confinement. He stated that three legs had appeared at the vulva, and that in all probability the case was one of locked twins. By the time I arrived, however, the fourth leg and both trunks had come down, and it was then apparent that the case was a double monster, a thoracopagus. After getting the patient put under the influence of an anæsthetic, I freed the arms, and then delivered the two heads, beginning with the posterior one. Although the patient was a primipara, the labour was six weeks before full term; the heads were therefore small, so I had not much difficulty in delivering them. The children had been both dead for some time before my arrival.

The patient had consulted me thirteen months previously. The following is an abstract of the notes which I made at the time:—

Mrs. G., aged 25, married one year, never pregnant, complains of dysmenorrhœa during the first two days of each period. Two years since this commenced. Had never any dysmenorrhœa before. Duration of each period for the last two years has been six to eight days; previously, it was three to five days. The quantity is also increased. On examination, I found the uterus enlarged and acutely anteflexed; considerable erosion round os externum; large amount of tenacious mucus.

Diagnosis.—Endometritis and cervical catarrh. I advised dilatation and curettage of the uterus, but as patient refused operation, I applied iodised phenol to the endometrium several

times at intervals of a month. Between times, she used a hot vaginal douche regularly. The condition improved under this treatment, and she became pregnant soon afterwards, as above described.

Pathological report by Dr. Lindsay.—The monster was formed of two well-developed male foetuses, united anteriorly from the summits of the breastbones to the common umbilicus. Each of these was about equal in size to a foetus of the eighth month of development, or an undersized infant at term. The union was effected in such a way that were two normal infants cleft from the suprasternal notch to the umbilicus, the sides of the clefts drawn apart and the bodies opposed to each other face to face, so that the right side of the cleft in one united with the left side of the cleft in the other, and so with the remaining two sides, the monster would be exactly reproduced. In this way, as in the specimen, there would be two breastbones on opposite sides of the common trunk, each formed of half of the sternum of one foetus and the opposite half of the sternum of the other foetus.

For convenience of description, the foetus on the left of the photograph (Fig. 1, p. 304) is designated *A*, and that on the right *B*. They were not exactly opposite to each other; their mesial planes formed a wide angle, so that the right shoulder of *A* and the left of *B* were farther apart than the left of *A* and right of *B*. By reason of this, there were a broader and a narrower surface, and it is convenient to speak of these as the anterior and posterior aspects of the common trunk, the broader or anterior being that which is shown in the illustration (Fig. 1, p. 304). A dissection of the anterior surface revealed exactly what is found in a similar dissection of a normal body, but, of course, each half belonged to a different foetus. The posterior surface was not dissected in view of the preservation of the specimen, yet doubtless dissection would have yielded the same result here also. Indeed, keeping in mind the theoretical mode of construction, the skeletal anatomy of the composite trunk may be said to have been perfectly normal. The diaphragm was complete, and of a form such as would result from the union by their anterior edges of two normal diaphragms. The pleural and peritoneal cavities of each foetus were completely shut off from one another and from the corresponding cavities of the adjacent foetus; but the pericardium was a single chamber, in which were situated the two distinct hearts. The lungs and abdominal viscera of *B* were normal, but in *A* there was no spleen, and there was

a slight transposition of the viscera, inasmuch as the caput cæcum and vermiform appendix lay in the left iliac fossa. There was also in *A* a short Meckel's diverticulum. In each case, the testicles had descended into the scrotum, and the anus was perforate. The two livers were conjoined to form a single large organ, the component halves being somewhat irregular in regard to their division into lobules. The umbilical vein in fœtus *A* entered the organ to the right of the gall-bladder instead of to the left, while a fold of peritoneum running between two lobules in the part belonging to *B*



FIG. 1.

apparently represented the aborted umbilical vein of that fœtus. Both gall-bladders were present.

Of greatest interest were the arrangements for the circulation (Fig. 2, p. 305). In the umbilical cord, there were two arteries derived from the internal iliacs of *A*, while the corresponding vessels of *B* disappeared about the urachus, and the internal iliacs of that fœtus were mere threads, smaller than the adjacent external iliacs, while the abdominal aorta of *B* was only half the size of the same vessel in *A*. The single umbilical vein passed through the abdominal cavity of *A* to the common liver, and the blood carried by it was eventually collected into a large U-shaped sinus in the substance of the organ. This hepatic sinus was connected by

equal openings with the vena cava of each fœtus. The heart of *A* was normal in size, while that of *B* was only about half as large, and it was inverted in position, its base resting on the diaphragm, and its apex lying at the root of the neck. Between the arches of the aortæ, there was a V-shaped communicating trunk, equal in calibre to the vessels which

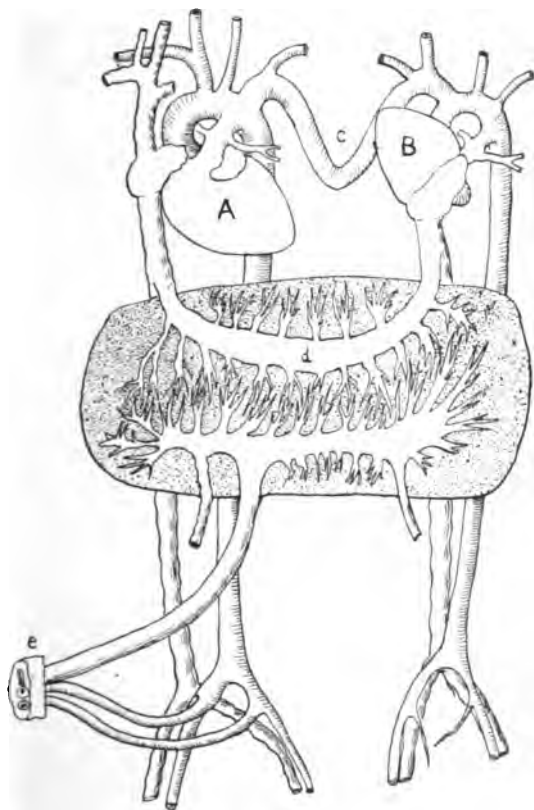


FIG. 2.

it joined. From the position and relations of this, it had evidently been formed by the anastomosis and enlargement of the left internal mammary of *A* and the right internal mammary of *B*.

Fœtus *B* received through the composite liver a share of the blood returning from the placenta, and a corresponding

amount of blood must have been transferred from *B* to the arterial system of *A* for transmission to the placenta. That the transference was effected through the large vessel connecting the two aortæ is not so evident as at first sight it appears to be. The blood pressure in the main arterial trunks of the two foetuses must have been equal to the extent of overcoming the same resistance in the systemic capillaries of each; but, in addition, the pressure in the aorta of *A* was sufficient to carry on also the placental circulation. This difference in the resistance to be overcome in the two systems, and the consequent difference in the blood pressures, was reflected in the widely different dimensions of the two hearts. On this consideration it is evident that there could not have been a flow of blood from *B* to *A* through the communicating vessel. The current must have flowed from the region of high pressure in the aorta of *A* to the region of low pressure in the aorta of *B*. It seems necessary, therefore, to suppose that the return of blood to *A* took place through the capillary anastomosis in that part of the body wall common to both.

Physiologically, foetus *B* was a parasite on its twin brother. Its nutrition had been adequately provided for by the host; but if the supply had been below its requirements during development, *B* would have become a mere appendage on the autosite.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1903-1904.

MEETING VI.—2ND DECEMBER, 1903.

The President, DR. CHARLES R. M'LEAN, in the Chair.

DEMONSTRATION OF CASES TREATED BY X-RAYS, INCLUDING LUPUS, RODENT ULCER, FAVUS, AND LOCOMOTOR ATAXIA.

BY DR. SAMUEL CAPIE AND DR. JAMES R. RIDDELL.

About twenty-five patients in all were shown, the greater proportion being cases of rodent ulcer and lupus, all greatly improved, and in some cases quite cured. Each case was

examined by the members individually, the details of each case being given on a card. Many of the cases were furnished with photographs, which showed great improvement resulting from the treatment.

The practical utility of the installation was made apparent as a means of diagnosis when Dr. H. H. Borland showed a child, *æt.* 2, who was reported by its mother to have swallowed a safety-pin. Dr. Riddell carefully examined the thorax and abdomen of the child by the fluorescent screen, but no trace of the pin was found. He suggested, however, that this negative result should be confirmed by a skiagram. (This was done a few days later at the Glasgow Royal Infirmary, when the photograph was also negative, and the mother thus finally convinced that the pin was not in the child's body.)

A complete and interesting demonstration was afterwards given of the application of the *x*-rays in therapeutic work, and of the apparatus used in electro-therapeutics.

Dr. Riddell gave a brief but concise *résumé* of the value of, and indications for, the high-frequency current and the violet rays.

On the motion of the *President*, a hearty vote of thanks was accorded to Drs. Capie and Riddell for their demonstration.

REVIEWS.

A Text-Book of Pathology. By ALFRED STENGEL, M.D.
Fourth Edition. London: W. B. Saunders & Co. 1903.

THE fact that this text-book has reached a fourth edition, and has been reprinted several times, demonstrates that it suits the taste of a large number of students of pathology, yet it is not a book that we can unreservedly recommend. It is well printed, and the illustrations are, for the most part, good and sufficient for their purpose. It has been very well brought up to date, especially in the chapters devoted to general pathology, as the author observes in his preface. For example, the synopsis of immunity is excellent; in the article on trypanosomiasis the recent discovery of trypanosomes in the human subject finds mention; and other examples of this good feature of the work might be cited.

The subject is very completely covered within a compass

which, considering its size and the fact that a hundred pages are devoted to bacteriology and thirty-five pages to histological and bacteriological technique, is decidedly brief. The style is clear and concise, but, on the other hand, the want of space results in many parts in something not very different from a mere catalogue of diseases and the phenomena of disease. This is particularly the case in the "special" chapters. Space, moreover, might have been saved by a less rigid adherence to the plan of classification of the pathological conditions, which could, with advantage, have been devoted to more detailed description of the really important diseases. The perspective of the work would thereby have been improved, and better and clearer pictures of disease would have been secured. A disadvantage from our point of view is, that a good deal of the terminology is not that in general use here. Altogether we cannot regard it as an ideal students' text-book of pathology.

Report of the Board of Health on a Second Outbreak of Plague at Sydney, 1902. By J. ASHBURTON THOMPSON, M.D., D.P.H., President, Chief Medical Officer of the Government.

THIS report by Dr. J. Ashburton Thompson is well worthy of the careful consideration of all who are interested in plague from the point of view of the medical officer of health. It contains interesting facts, carefully recorded experiences, and suggestive reflections. It would be out of place here to attempt a detailed review of the report. We must be content with a brief indication of the contents, and a few extracts.

The contents are divided into three parts:—I, The epidemic; II, The mode of spread; III, The epizootic in relation to the epidemic. There is an appendix, twenty-eight tables, four diagrams, and two plates.

Experience of plague in Sydney in 1900 pointed to rats as the sole source of the infection in man, and later experience has strengthened that view. And the theory that the flea is the intermediary between the rats and man also came to be accepted "on the ground that it, and it alone, appeared capable of co-ordinating the observed facts."

On the subject of the method to be adopted for the prevention of infection from rats, Dr. Thompson says (p. 2):—"The promise of safety for the future lies neither with attempts to prevent the importation of plague-rats (which must fail from

time to time), nor with attempts to exterminate the rats infesting the locality to be defended (which we have learned is practically impossible), though both of these measures have their valuable uses, but in habitually excluding rats from inhabited premises. This, manifestly, is a defence which can be set up successfully by local authorities; it requires persistent effort, but involves hardly any expenditure of municipal funds."

As regards the management of the epidemic of 1902, less stringent measures were taken than in 1900, and apparently with satisfactory results. This point is so important that, to obviate any misapprehension, the author's own words may be given:—

"The method of management differed essentially from that followed in 1900 in three important respects. First, in 1900 we had pointed out, in the course of our report on the case of A. P. (Case 1), that the Coast Hospital was the only suitable place to which plague cases could be sent for isolation and treatment, and had repeated this recommendation several times during the earlier part of the epidemic. Secondly, we had announced, on 2nd March (Case 5), that it was unnecessary to segregate contacts, and that for the future we should, as a rule, remove only the sick from dwellings. Thirdly, on 23rd March (Case 32), we had so far expressed our opinion as regards probable diffusion of infection by merchandise as to give instructions that the latter might be removed in the ordinary course of trade from the Adelaide Bond, which stood on that infected area which was the first to be quarantined for cleansing. But the head of the Government of the day declined these several advices; and, as a matter of fact, patients were strictly isolated in the buildings, utterly inadequate to this purpose, and accessible with difficulty, which alone the Maritime Quarantine Station at North Head afforded; all contacts were segregated at the same place, and cleansing areas were as strictly closed, or 'quarantined,' during cleansing as physical circumstances permitted.

"15. In 1902 our advice was implicitly accepted; and, consequently, as regards the three points mentioned, we did as we had wished to do in 1900. First, the sick were sent to wards within the Infectious Diseases Division of the Coast Hospital, where they were dealt with almost exactly as though they had been suffering from measles or from some other of the commoner infectious fevers; the only difference was that visitors, though discouraged, were more freely admitted than would have been the case had the disease been measles in

fact. No other special precaution was taken than that of rendering the wards rat-proof; and the general economy of the hospital was disturbed only by the number of patients suffering from this one disease for whom accommodation had to be found. Secondly, the sick alone were removed from their dwellings. The other members of the households to which they belonged were not interfered with. They were told that their premises were probably infectious, and were advised to withdraw from them until they had been disinfected, when the circumstances required this; but they were never compelled to move, neither were they supervised, except for a short time quite at beginning of the epidemic. Pending completion of disinfection, entrance to the house where the patient had lain was forbidden to all but the residents; but the latter were allowed to go in and out. Disinfection was always very promptly done, and was usually finished within thirty-six hours of the patient's removal; though in the case of extensive premises the time was much lengthened, and access to theatres, halls, and the like was denied to the public until the structural repairs necessary to exclude rats had been completed. Thirdly, areas which were deemed to be infective were rapidly and thoroughly cleansed, but they were not closed during the operation; movement of population and trade were in no way interfered with.

"16. These changes constituted remarkable ameliorations. Were they beneficial under all aspects? The following comparison permits the inference that they were so, and in a striking degree:—

"TABLE I.—COMPARING THE EPIDEMICS OF 1900 AND 1902, AS REGARDS NUMBER OF ATTACKS, FATALITY, AND COST.

"Epidemic.	Number of		Fatality.		Cost.
	Cases.	Deaths.	Gross.	Chinese Excluded.	
1900, . . .	303	103	34·0	32·4	£176,000
1902, . . .	139	39	28·0	25·75	24,000 "

An account is given of an outbreak of plague in the animals in the Zoological Garden. One of the keepers contracted the disease and died.

Dr. Frank Tidswell, micro-biologist to the Board of Health, furnishes a report on "Ecto-parasites of the Rat." There are

two plates of photomicrographs of fleas. As to the question of rat-fleas in relation to man, Dr. Tidswell says:—"It will be seen that although we cannot claim to be in a position to make any general statement with respect to the proclivities of the various fleas, the few trials we have made show clearly enough that of the four species found by us upon rats, three—*Pulex pallidus*, *Pulex fuscatus*, and *Pulex serraticips*—possess the ability to bite human beings."

We are sure that Dr. Ashburton Thompson's report will prove interesting to medical men, especially medical officers of health.

An Atlas of Human Anatomy, for Students and Physicians.

By CARL TOLDT, M.D. Translated from Third German Edition, and adapted to English, and American, and International Terminology, by M. EDEN PAUL, M.D. Sections I and II. London: Rebman Limited. 1903.

THE translator's apology for the present work is the "fragmentary" nature of all the atlases of anatomy hitherto published in English, and he claims that this translation is the first adequate application to the study of human anatomy of the "visual or graphic method, both in the acquirement and in the revivification of knowledge." In view of the want of finality in the anatomical nomenclature, the translator has retained the more consistent terminology of the German and Austrian schools, and has printed it beneath the English terms, and in different type. His authorities for the English terminology are Quain's *Elements* and Macalister's *Text-Book*. The work, when complete, will consist of six sections, of which we have so far received Nos. I and II, dealing respectively with osteology and arthrology.

What strikes us immediately in the osteology plates is the absence of indication of the muscular attachments; the English student has been, by the well-known work of Holden, so accustomed to the representation of these attachments that we fear that their absence will tell against the work becoming popular; but perhaps this want will not be felt when we come to the section on myology. In other respects the illustration of the bones is admirable, and we would draw special attention to the many drawings representing the different regions of the skull.

In the section on arthrology we find the ligaments depicted with extreme care and fidelity; but here, again, we have the

appearance of the drawings greatly spoilt by the surrounding white ground being covered with the names of the various structures shown. However, this, which appears a blemish from the point of view of artistic effect, will appeal to the utilitarian spirit of the student or busy physician bent on "revivification" of his knowledge.

The Nitrites and Allied Compounds: Their Pharmacological Action and Therapeutic Uses, including the Croonian Lectures for 1893. By the late DANIEL JOHN LEECH, M.D. Edited by R. B. WILD, M.D. Manchester: Sherratt & Hughes. 1902.

THE friends of the late Professor Leech have carried out his intention of publishing in book form his Croonian Lectures for 1893, revised by him in the light of further investigations as late as in 1900. Together with the lectures are bound several short reprints from various medical journals on allied subjects, with relative portions (22 pages) of an extensive bibliography of materia medica which he had compiled, and 152 illustrations, sphygmograms, muscle tracings, and perfusion diagrams. There is prefixed a lecture by Professor Leech on the relation of pharmacology and therapeutics as affording a valuable indication of the lines upon which he taught and conducted his own researches, and forming a suitable introduction to the other papers.

It may be said at once that the book is a model of careful research, alike in the laboratory and the hospital, that the physiological investigations are carefully and accurately conducted, the clinical observations are most interesting and instructive, and that every medical man should familiarise himself with the powers and limits as here explained of this most potent class of drugs. One point upon which stress is laid is the rapid deterioration of certain preparations, such as the spiritus ætheris nitrosi, and the advisability of replacing it by a solution of ethyl nitrite in absolute alcohol. Another interesting detail is the short period of time during which many of the nitrites act, nitrite of amyl, for example, being much more transitory in its effects than nitroglycerine or nitrite of sodium. His researches explain the failure of spiritus ætheris nitrosi as a diuretic in cases of low arterial tension, as in cardiac dropsy. The influence of the nitrites on the blood, more especially as converting oxyhæmoglobin to

methæmoglobin, is dwelt upon, and their power of temporarily affecting the muscular tissues, more especially the involuntary and cardiac, when administered in even very minute quantities. It is of interest to note that while muscular contractile power is impaired, the muscles are not really injured, for on removal or destruction of the nitrite molecule, they rapidly resume their normal function, and no trace is left of the effects of the drug. The nitrates are also studied, and, finally, we have full and careful suggestions as to the proper use of nitrites and nitrates in various conditions, such as angina pectoris, cardiac dyspnœa, syncope and cardiac failure, pulmonary dyspnœa, uræmic dyspnœa, Cheyne-Stokes respiration, migraine, neuralgia, epilepsy, Bright's disease, sea-sickness, &c., with guiding remarks as to the special drug and dose to be employed.

The book will well repay perusal, and is a fitting memorial of its author.

Lessons on Massage. By MARGARET D. PALMER. Second Edition. London: Baillière, Tindall & Cox. 1903.

THIS manual is well written and abundantly illustrated. As it is intended chiefly for nurses, the anatomical part has due prominence. The fact that in a short time the first edition has been exhausted and a second edition called for, is a sufficient testimonial in its favour. A chapter on the Schott treatment and one on bandaging should add to its usefulness. The book has an excellent glossary.

The Midwives Act, 1902, and the Teaching of Midwifery to Students of Medicine. By W. J. SINCLAIR, M.A., M.D. Manchester and London: Sherratt & Hughes. 1903.

IN this brochure Professor Sinclair makes an appeal for reform in the teaching of clinical midwifery to the medical student. He is strongly of opinion that the present regulations for the compulsory teaching of this subject are a disgrace to the country, and hopes that the new Midwives Act will compel the General Medical Council to reconsider the whole question. In the opening pages he discusses shortly some of the probable effects of the Midwives Act on the training, supervision, and registration of midwives, and on the professional status and income of the general practitioner.

Nursing Notes on Midwifery and Gynæcology. By SISTER ROSS. London: The Scientific Press, Limited. 1903.

THE notes contained in this little volume were written in the first instance for the use of nurses connected with the Rotunda Hospital, Dublin, and have been put into book form at the request of a number of the students. They form a handy little compendium of the more important items in obstetrical and gynæcological nursing, and can be recommended for their usefulness and general reliability.

In a future edition a few mistakes which have crept into the text will require correction. For instance, the following definitions are rather bewildering:—(1) "The lower uterine segment is the narrow portion of the uterus between the cervix and the internal os;" (2) "Position is the way the child lies in the uterus;" and (3) "When the foetus has been expelled any time after the placenta is formed, but before quickening takes place, it is termed a miscarriage." The word "dilatation," also, appears throughout the volume as "dilitation," and on p. 30 "precipitate" should be "precipitate."

The index will be found very useful, but might, with advantage, have been made more complete.

Gynæcology: A Text-Book for Students and a Guide for Practitioners. By WILLIAM R. PRYOR, M.D. With 163 Illustrations. New York and London: D. Appleton & Co. 1903.

PROFESSOR PRYOR intends his text-book on *Diseases Peculiar to Women* to describe those diseases and their treatment as fully as possible, and considers, by strictly confining himself to gynæcological topics, he has sufficient space to devote to them. Modern works on gynæcology seem to him to devote only a few pages to a description of diseases peculiar to women, as they "are made too general, and discuss subjects which properly belong to, and are better treated of, in other departments."

Unfortunately the author has formed a very imperfect conception of the difficulties attending the making of a text-book, and by dumping down unattested facts and unsupported opinions, he has produced one which merely accentuates the defects so often seen in books of that class. Starting with the principle that "it is not the province of the gynæcologist

to illustrate the findings of the microscopist or of the anatomist"—whatever that may mean!—he says "the work is chiefly notable for the absence of bacteriology and minute anatomy, and to (*sic*) the prominence given to non-operative, as well as operative, treatment."

The book, in fact, is of local interest as a record of the opinions and methods of a busy gynæcologist. but cannot be taken as an authoritative statement of either the pathology or the treatment of diseases of women. He speaks *ex cathedra*, as he expresses it in a work formerly noticed in our pages, and many of the unsupported opinions he expresses, and even many of the facts he adduces, are both doubtful and erroneous, while the English style, as is too often the case in American books, is frequently repulsive. Some of his methods of treatment will interest operative gynæcologists, but we cannot recommend the book as a complete or safe guide to the study of gynæcology.

A Short Practice of Midwifery. By HENRY JELLETT, M.D.
Fourth Edition. London: J. & A. Churchill. 1903.

WE have great pleasure in extending a hearty welcome to the fourth edition of this most excellent little text-book in midwifery. We have always in our notices of previous editions expressed ourselves as most favourably impressed with this work, and we would say again that, as an elementary text-book and introduction to the study of midwifery, we know of no book to compare with it. Dr. Jellett has the happy faculty of writing with wonderful fulness and yet of avoiding detail; he has also the rare gift of imparting interest into each subject he takes up.

The present edition has been thoroughly revised, and there are some additional plates.

The report of the Rotunda Hospital for the past two years has been added.

Aids to Physiology. By PEYTON T. B. BEALE, F.R.C.S.E.
London: Baillière, Tindall & Cox. 1903.

THIS book is one of the well known students' aid series, and is founded upon that written many years ago by Professor Lowne, but now almost completely rewritten on account of the advance in physiological knowledge during recent years.

It extends to about 240 pages, is suitably illustrated, clearly written, carefully edited, and is well adapted to serve its purpose of refreshing the memory of students who have already obtained a fair knowledge of the subject. The author states that greater stress has been laid on some matters than on others owing to their acknowledged difficulty, and we find that on the whole the exposition is judicious and accurate. The very free use of heavy type rather defeats its own object of drawing attention to the more important points of every paragraph. Personally, we have the feeling that a student will benefit more by glancing over a larger work which he has already carefully studied, than by taking up a small book such as this, which is necessarily condensed and bald in statement. So far as it goes, however, it is very well done.

The Illustrated Medical Dictionary. By W. A. NEWMAN DORLAND, A.M., M.D. Third Edition, Revised and Enlarged. London: W. B. Saunders & Co. 1903.

THE rapid sale of the earlier editions and reprints of this volume must have been very gratifying to the author, and may be taken as evidence of the room that existed for a work of this size, intermediate as it is between the huge encyclopædias and the small and incomplete medical dictionaries. The present work claims to be a complete dictionary of terms used in medicine, surgery, dentistry, pharmacy, chemistry, &c., with their pronunciation and derivation, as well as their definition. In addition to this, it contains numerous tables or lists of arteries, veins, nerves, micro-organisms, diseases, stains, tests, and other subjects. The illustrations, the letterpress, the arrangement of contents, and the latter themselves are all deserving of high praise, and the work thoroughly merits the success it has attained.

Doctors and their Work, or Medicine, Quackery, and Disease. By ROBERT BRUDENELL CARTER, F.R.C.S. London: Smith, Elder & Co. 1903.

THIS volume consists of a series of essays which are designed for perusal by patients rather than by doctors, and which are calculated to give the laity an insight into the conditions under which medical men are trained and practise their profession.

The titles of the chapters will give an idea of some of the points of view from which the subject is regarded, thus—I, Introductory; II, Medical students and their preliminary education; III, Professional education; IV, Medical designations; V, The aims of medicine; VI, The wishes of the patient; VII, Medical grievances; VIII, The hindrances to medicine: (i) "Antis"; IX, The hindrances to medicine: (ii) Quacks and quackery; X, Professional "eminence"; XI, Specialism; XII, Speech and silence; XIII, Medical "etiquette"; XIV, Doctors and the insane; XV, Medical women.

It remains to be said that the book is interesting and pleasantly written; and that, while the author occasionally lays himself open to the charge of bigotry, or, at least, of having a few "antis," he appears to be, in the main, a reliable instructor of the lay reader.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By WALTER K. HUNTER, M.D., D.Sc.

Four Cases of Acute Suffocative Pulmonary Œdema. By Dr. H. M. Hewlett (*Intercolonial Medical Journal of Australasia*, 20th December, 1903).—CASE I was a woman, aged 49. Her first attack came on in the evening after a hard day's work. She was markedly cyanosed, with an anxious look in her face. There was a short, frequent cough, and very abundant spit, frothy, and looking like beaten-up white of egg, but of a pinkish tinge. Analysis of the sputum showed it to contain 7·5 per cent albuminous substances, and 725 per cent salts. The duration of the seizure lasted about an hour, and during that time over a pint of sputum was expectorated. Examination of the chest showed prolonged expiration and abundant coarse bubbling râles, but no dulness to percussion. Respirations numbered 48; pulse 108. The urine had a specific gravity of 1013, and contained 0·05 per cent albumen. During the next year, the patient had five other attacks similar to the first one, but of longer duration (five to six hours), though not so intense as regards the symptoms. Each seizure came on soon after coitus. Examination at the end of these twelve months showed the heart's apex impulse to be in the seventh interspace, 5 inches to the left of the middle line. No murmur was to be heard, but the second aortic sound was accentuated. The pulse was 92, of high tension, and the vessel thickened. The lungs were perfectly normal. There was some œdema round the ankles. The urine had a specific gravity of 1005, and contained 0·35 per cent albumen. The patient was accustomed to partake freely of alcohol.

CASE II was a woman, aged 52. She had four attacks in two years. They occurred mostly at night, and the characters of the symptoms and spit were very similar to those in Case I. The lungs here also were, during the seizure,

full of bubbling râles, but the next morning all adventitious sounds had disappeared. There was evidence of hypertrophy of the left ventricle, and a high tension pulse. The patient was alcoholic, and probably had had syphilis.

CASE III, a woman, aged 69, had ten seizures in three years, the duration of each varying from a half to five hours. They all came on after over-exertion, and all except one at night. The symptoms during the paroxysm were much the same as in the other two cases, namely, cyanosis, dyspnoea, and abundant watery expectoration. Here, again, there was hypertrophy of the left ventricle (apex impulse in seventh interspace); the arteries were rigid, and there was albumen in the urine.

CASE IV, a woman, aged 52, died during the seizure. She had never been known to complain of any previous illness, and on the day of her death appeared in her usual health, and had done a heavy washing. While out shopping, she said she was short of breath and felt unwell. She turned home, and when near to the house fell down and had to be carried inside. When seen by Dr. Hewlett, she was intensely cyanosed, with a pink frothy fluid coming from the nostrils. The pulse was scarcely perceptible, and the respirations very infrequent and spasmodic, and soon ceased altogether. A few minutes after death, more than a pint of blood-stained fluid ran out of the nostril in a full stream. This fluid contained albumen and globulin 6.72 per cent, and 0.418 per cent salts.

At the *post-mortem* examination, the lungs were intensely and uniformly œdematous. There was no obstruction in trachea, larynx, or pulmonary vessels. The pleural cavities contained a large quantity of blood-stained fluid. Microscopically, the air spaces were seen to contain shed epithelium, red corpuscles, and *débris* matter. There was no definite infiltration of the alveolar walls, nor did the blood-vessels show any distinct engorgement. The heart showed intense fatty infiltration, especially the walls of the right ventricle. The kidneys seem to have shown slight interstitial change. The brain and its membranes were quite normal.

In reviewing the cases, Dr. Hewlett draws attention to the suddenness of the onset of the symptoms, and the rapidity with which they pass off when once recovery begins. The abundant expectoration seems to be the first symptom, and in Dr. Hewlett's opinion is the cause of the cyanosis, dyspnoea, and laboured cardiac action. When the sputum ceases, the symptoms at once go. He also draws attention to the fact that the vast majority of the attacks occurred at night, frequently after over-exertion, and that the cases all showed evidence of cardio-vascular and renal disease. As to the nature of the condition, he quotes Professor Martin's opinion that the escape of this albuminous fluid into the lung alveoli is due to a sudden alteration in the permeability of the capillaries and alveolar cells of the lungs, and in support of this opinion it is shown that the permeability of living animal membranes can be altered, and is under nerve control.

As to treatment, it is recommended to give morphia ($\frac{1}{4}$ gr.) hypodermically, and this drug seems to have been almost uniformly beneficial in cutting short the seizures in most of the cases in which it has been given.

SURGERY.

By ARCH. YOUNG, M.B., C.M., B.Sc.

An Anatomical Criticism of the Procedure known as "Total Prostatectomy."—Mr. C. S. Wallace, B.Sc., F.R.C.S., in the *British Medical Journal* for 13th February, 1904, has an exceedingly interesting paper dealing with this subject, particularly with regard to the anatomical relations of the prostatic capsule, "true" and "false." The paper is well

illustrated by numerous plates, and it may be stated that it very well supports the views of a now considerable number of anatomists and surgeons as to the erroneous nature of the claims advanced by certain surgeons respecting the so-called "total" extirpation of the enlarged prostate. Mr. Wallace believes these claims to be unsupported by facts.

Like other writers, he recognises that much of the difference of opinion may be due to a looseness in terminology. The term "capsule" is, undoubtedly, taken by different writers to mean something of quite different nature. On this point Mr. Wallace contrasts the descriptions of Sir H. Thompson, Quain's *Anatomy*, and Mr. Shattock. Thus, Sir H. Thompson terms the fibrous covering derived from the recto-vesical fascia, and containing the venous plexus, the "sheath," while the "capsule" he takes to be merely the thin outer non-glandular portion of the prostatic stroma, which consists of both muscular and fibrous tissue.

Quain's *Anatomy* defines the "fibrous capsule" as meaning the fibrous sheath derived from recto-vesical fascia, and does not mention any "capsule" separable, like the kidney capsule, from the rest of the organ.

Shattock's suggestion that the outer non-glandular part of the prostate be termed the cortex seems to appeal to Mr. Wallace as more correctly representing the true state of matters. He proposes, therefore, "that the investment from the recto-vesical fascia be called the 'sheath,' and that the outer part of the gland proper be called the 'cortex.'"

The following are the conclusions which Mr. Wallace draws from the study of all the facts which are detailed in his extremely lucid paper:—

"1. That the usual form of prostatic enlargement is an adenomatous one.

"2. That the adenomatous tissue may surround the urethra, or form masses in the lateral parts of the organ, behind the urethra, or in all three parts.

"3. That the parts removed may consist of adenomatous masses from the lateral parts, or of an adenomatous formation completely surrounding the urethra.

"4. That there is always left behind a definite laminated envelope containing glandular tissue, derived from the expanded outer portion of the organ.

"5. That the amount of envelope left on the surface of the tumour after removal depends on the depth at which the enucleating finger cleaves the envelope.

"6. That the recto-vesicular fascia is not opened, nor the prostatic plexus of veins injured.

"7. That though it is possible to remove a small adenoma from the centre of the lateral part of the prostate without extensively injuring the urethra, yet this canal is removed *in toto* when the adenomatous growths are extirpated in their envelope, and the lateral walls come away adhering to the adenomata when these are of any considerable size."

He suggests that the term "surgical capsule" should be applied to the "envelope formed from the prostate by the expansion of the adenomata." In his view, "it is a pathological formation, and represents more than the outer non-glandular portion, to which Mr. Shattock has given the name 'cortex.'" "To its presence is due the small amount of bleeding and the absence of urinary extravasation. Indeed, in the so-called "total prostatectomy," the enucleating finger never passes outside the limits of the prostate, and therefore cannot enter the recto-vesical fascia or tear the prostatic plexus of veins."

Mr. Wallace's paper is in continuation of, and a further elaboration of, a contribution by him to the *British Medical Journal* of 29th March, 1902, on the same subject.

ATTENTION may here be drawn to an abstract, in the November number of the *Glasgow Medical Journal*, 1902, of a paper by Albarran and Motz (de la Clinique de M. le Professeur Guyon à l'Hôpital Necker) in the July issue of the *Annales des Maladies des Organes Génito-Urinaires*, in which, amongst other points of interest, attention was drawn by these writers to the method of formation of a "false capsule" by the compression of the peripheral part of

the gland between the adenomatous mass and the "true capsule" externally. Mr. Wallace's contribution is in complete accord with the conclusions on this subject arrived at by MM. Albarran and Motz.

A Case of Multiple Adenoma of the Prostate, complicated by Vesical Calculus—Perineal Prostatectomy.—G. Frank Lydston, M.D., Chicago (*American Medicine*, 30th January, 1904), recounts a case which is quoted here on account of (1) the large number of distinct tumours which were removed separately from the prostate; (2) the complication of calculus undiscovered prior to operation; and (3) the strikingly rapid recovery of bladder-function following operative treatment.

The case was that of a man, aged 59, who for ten years had frequency of micturition, and for some years considerable pain in urination. The urine was loaded with pus, and there was periodical hæmaturia. Patient had lost flesh. The prostate was found, on examination, much enlarged, the increase in size being a uniform one of the lateral lobes, with a distinct median lobe projection. There was residual urine to the amount of 3 oz. Careful examination failed to detect stone.

Perineal prostatectomy was performed. A Y-shaped incision was made, and the prostate drawn down. The operation was somewhat prolonged because of the number of tumours, though there was very little difficulty in shelling them out with the finger. The lateral lobes contained fifteen distinct adenomas of varying size. After their removal, a large sessile median tumour was delivered by a volsellum, and freed from its attachments by the finger. Beneath this growth, and completely concealed by it, occupying a concavity on its anterior surface, "was a good-sized calculus. This rolled out on the floor of the bladder as soon as the median 'lobe' was delivered, and was readily removed with the forceps." The hæmorrhage during the operation was trifling. The bladder was drained for the first five days by a large perineal tube; on the eighth day, micturition occurred *per vias naturales*, and on the fourteenth day after the operation the patient left hospital, having almost complete control of the vesical sphincter, and micturition being almost normal in frequency.

The Plasma-Cell, the "Small Round-Cell," and the Cells of Chronic Inflammation in General: a Survey of Recent Literature, with the Results of some further Observation and Experiment.—Arthur Whitfield, M.D., M.R.C.P., writing on this subject in the February number of *The British Journal of Dermatology*, concludes as follows:—

"In chronic irritation, cells are collected at the site of irritation which are indistinguishable from the lymphocyte and the large mononuclear cell of the normal blood.

"The process of collection is fairly rapid, but the speed is not so great as to be incompatible with their local production as opposed to their arriving by means of the blood-stream. They are produced first and in greatest quantities in the neighbourhood of capillaries and small veins, and many of these are found packed with them. It is probable that some may arrive by means of the blood-stream; but in the absence of a marked mononuclear leucocytosis, it is improbable that all, or even the majority, are derived from this source. There is some evidence that the mononuclear cells of the blood are derived from endothelium, and that from the same source lymph-follicles may be developed as required in the permanent lymphatic glands, and also in tissues which normally contain no lymphoid tissue.

"The small mononuclear cells or lymphocytes are not derived, in the majority of instances, from the plasma-cells, and the term 'daughter plasma-cell' is therefore objectionable as implying an unjustifiable assumption.

"The most probable origin of the locally produced cells is from the endothelium of vessels and of the perivascular spaces. They do not appear to be derived from the simple fixed-tissue corpuscles, though as the endothelial

cell may form connective tissue, so these derivatives, if not too far specialised for the purpose of combating the irritant, may probably also settle down into connective-tissue corpuscles.

"The function of these cells is still unknown, but it is almost certain that they are closely connected with the question of immunity, possibly with local immunity. Bulloch found a slight but definite increase of the mononuclear hæmic cells to coincide with the development of experimental immunity."

Multiple Hæmangiomas.—At the twenty-seventh Annual Congress of the American Dermatological Association, held in Washington in May, 1903, Abner Post, M.D., Boston, read notes of a striking case of this affection. Full particulars and illustrative photographs are given in the published *Transactions of the Association*.

The patient was aged 16 years, a healthy girl, and presented a large number of curious tumours scattered very thickly on the palmar and dorsal aspects of the right hand and fore-arm, with scattered nodules on the inner surface of the arm and a few on the front of the chest. She had been seen six years before, and was, in fact, then treated by somewhat heroic operative means in the Massachusetts General Hospital, the tumours being freely excised, snipped away with scissors, and a mass in the axilla carefully dissected out. These proved to be, in the main at least, dilated veins. Only a few venous radicles required tying. The masses on the hand and fingers were not entirely removed, but were freely incised, and bleeding controlled by firm bandaging. A few months later all remaining prominent collections of veins were touched with the actual cautery. The condition, it was then noted, began to appear about the end of her first year of life, the first swelling appearing under the arm.

After the operative treatment just referred to—viz., in 1897—recurrence gradually took place until, when seen in 1903 by Dr. Post, the condition of six years before had been practically reproduced, and the description of the local condition might be taken as applicable equally well to the two dates. The right fore-arm was, however, larger and slightly longer than the left, the right hand nearly double the size of the left.

The increase in size was due to a mass of nodular tumours occupying all the surfaces of the fingers and the palm, extending up the wrist on the ulnar side. The palm, except over the thenar eminence, was filled with a nodulated mass. On the arm were many isolated, and in the axilla several closely set, tumours of varied size. Over the sternum and just above the right breast were two small tumours. There were no tumours on the rest of the body. The arm, and especially the fore-arm, showed numerous subcutaneous swellings due to enlarged veins. Many of the tumours felt quite resistant, some elastic, but little altered in shape by pressure. "Judging by touch alone, they seemed more like fibromata than simple angiomas." The bones were unaffected by morbid growth. The radiograph showed, however, an increased opacity in several of the tumours, so that their outlines were well-defined; also, a series of small opacities nearly as dark as the bones themselves, possibly phleboliths, were visible on the plates.

Several tumours were excised, some for examination, several because they threatened to break through. The bleeding was free, chiefly venous, but easily controlled. "The whole arm seemed one network of enlarged veins underlying these projecting masses."

The histological examination by Dr. F. B. Mallory proved the tumours to be hæmangiomas, and, as it is of some special interest, it is here quoted in detail:—

"For the most part the vessels are large, with thin walls, and would be classed as cavernous. In places, however, they are small, and approach more or less closely the capillary type. In almost all the vessels, but especially in the smaller ones, the lining endothelium is more prominent than in normal blood-vessels.

"The amount of connective-tissue in the walls of the blood-vessels is slight.

In places it is cedematous, and sometimes contains numerous mast cells. In places the vessels very closely approach the epidermis.

"Some of the cavernous vessels are more or less filled with old thrombi, infiltrated with a few cells, chiefly polynuclear leucocytes. It is probable that the calcified nodules seen in the x-ray photographs are due to the deposition of lime salts in such old thrombi.

"The increase in the size of the tumour nodules seems to be due chiefly to dilatation of the small new-formed capillary vessels."

Dr. Post quoted from *Die Elephantiasischen Formen* of Esmarch and Kulenkampff an account of a 3½-year-old girl who had a somewhat similar condition. At birth she had a large nodular swelling of the right arm; this slowly increased in size. The tumours were less numerous and larger than in the present case; they were of three kinds, some mainly composed of veins, some apparently of much dilated lymph-channels. The third variety was described as "a simple lipomatous angioma."

The treatment to be adopted in Dr. Post's case is not stated. At the discussion of the case, one further point was brought out, however—viz., that no abnormality was discovered in the heart or other organs in 1897, nor was there any appreciable fault in circulation to be found by Dr. Post in 1903.

Removal of the Upper Arm and Scapula for Endothelioma of Humerus in a Woman, aged 72.—Robert Jones, F.R.C.S.E., in the *Liverpool Medico-Chirurgical Journal* (January, 1904, p. 339), describes a case which he believes to have been one of this somewhat rare variety of humour affecting bone.

An old lady of 72, seen first in September, 1902, when she complained of pain below the head of the humerus and shooting pains down the arm and up the neck; also, there was limitation of, and pain in, movement of the shoulder-joint. There was no history of injury. Radiograph gave an ill-defined outline. By rest and local remedies the patient was rendered more comfortable for a time, and the condition was regarded at first as the common form of chronic inflammation about the shoulder, characterised by limitation of movement, atrophy of deltoid, &c. The patient was kept under observation, however, and, spite of the fact that she got much easier, the upper end of the humerus was seen to get visibly larger. Later on, about three weeks from the onset of definite symptoms, spontaneous fracture of the humerus occurred. A radiograph taken at this time "showed a very blurred outline of bone, and barely the suggestion of a fracture."

Amputation of the arm was determined on; but, before it was carried out, "the growth had considerably enlarged, had become fluctuant, and partially obliterated the axilla. There was neither bony crackling nor pulsation."

The operation was performed by long postero-external flap, the loose head being first removed, and the axillary vessels being ligatured thus more easily high up. The upper arm was finally separated by making a very short antero-internal flap. It was found that the disease had begun to affect the glenoid cavity, and the whole scapula was therefore removed subsequently; this was done by separating its connections *serialim*, tying vessels at once as they were cut. There was, as a result, very little loss of blood.

The patient made an uninterrupted recovery, and at the date of the case being reported to the Liverpool Medical Institution (2nd April, 1903), she was "quite well."

The report by the pathologist (Dr. Dimond) was as follows:—

"Microscopically, the growth consists of regularly arranged cells, about 11-14 mm. in diameter, resembling in every respect the cells lining either the peritoneum or the serous membranes; if anything, they were somewhat larger than the normal cells lining these membranes. The nuclei were round, and about the size of a red-blood corpuscle.

"There was a distinct network to be made out in the protoplasm of the cells, and one or two nucleoli were present in the nuclei. The general arrangement of the cells resembled that of an ordinary adenoma—i.e., cells

forming a lining to a distinct lumen or cavity representing the duct, &c., of a normal gland. Scattered throughout the specimen were numerous microscopical hæmorrhages, with a few white corpuscles scattered here and there, this giving a slight resemblance to a giant-cell sarcoma when viewed under a very low power.

"In this growth there were numerous masses of blood-clot, varying in size from the microscopical hæmorrhages above described to the size of a hen's egg. The tumour was extremely vascular, and capillaries formed a regular network throughout the specimen; the growth was generally of a dark red colour, and its consistency was that of a medullary carcinoma or of brain substance."

The somewhat unsatisfactory character of the x-ray plate which is printed with the paper is explained by Mr. Jones as resulting from the hæmorrhagic mass of the tumour, which had already invaded the soft tissues, blurring and rendering ill-defined the bony outline.

[It must be said that the pathological report is hardly conclusive. The diagnosis of endothelioma hardly seems to be fully or adequately supported by anything it contains. The mere superficial resemblance of the cells to those lining peritoneum is of little importance unless otherwise supported. The possibility of the tumour being merely secondary to some as yet undiscovered primary tumour in breast or elsewhere must, it seems, be still kept in view.—A. Y.]

DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

Modification of the Operation of Simple Extraction (*Knapp's Archives*, 1904).—Dr. Bedes Chandler has, like most other operators who have tried it, found that cases of cataract treated by simple extraction gave a much higher percentage of prolapsus of the iris than cases treated by the combined operation. To remedy this state of affairs, he does not make the usual iridectomy, but makes a small opening through the iris near its ciliary attachment. This prevents the accumulation of lens cortex and of aqueous behind the iris.

Ruptures of the Iris. Professor Weiss and Dr. Klingenhoeffer (*Knapp's Archives*).—A violent blow on the eye is sometimes followed by rupture of the iris, even when there is no penetrating wound of the eyeball.

This paper contains a summary of forty-one cases of such injuries, from the clinics of various German observers. Such injuries *per se* are not serious, but they are apt to be complicated with such conditions as traumatic cataract and rupture of the choroid. The authors criticise various theories as to the mechanism by which such ruptures are brought about, and are of opinion that they sometimes exist without being recognised.

Sarcoma of the Orbit: Report of Case Treated by X-Ray. Dr. Webster Fox (*Knapp's Archives*).—This case was one of sarcoma occurring at the inner canthus. An exploratory incision was made, and a portion of the tumour examined pathologically. The elements were found to be of the spindle-cell variety, and they invaded the tissues at different levels of the corium. The eyelids were much swollen, and there was a certain amount of exophthalmos. In the opinion of Dr. Fox, concurred in by his surgical colleagues, the case was considered to be inoperable, and as a last resource it was thought proper to try x-ray treatment. At first an application for a period of five minutes was made daily, with a high vacuum tube at a distance of ten inches, with a current of four amperes. This was continued for about

four weeks when, owing to excessive erythema, the applications for two weeks were lessened to three per week, and thereafter they were reduced to two and then to one. The result, judging from the author's drawings, has been in the highest degree satisfactory. During the progress of the treatment there was no ulceration, although the eyelashes and eyebrows were destroyed.

Cases of this kind are often most disappointing as regards the results of operative treatment, and it will be a distinct gain to ophthalmic practice if it should ultimately be proven that radio-therapy can be relied on in their treatment.

Metastatic Carcinoma of the Choroid. J. Herbert Parsons (*Royal London Ophthalmic Hospital Reports*).—The patient was a lady, aged 37, whose right breast had been removed for scirrhus in the year 1899. She enjoyed good sight till 1902, when she consulted Mr. Couper for dimness of vision in the left eye. On ophthalmoscopic examination, a growth was distinctly seen as an opaque detachment to the upper and inner aspect of the disc. Some of the adjoining retina below was detached in broad folds. The eye was enucleated and examined by Mr. Parsons. The growth was found to consist of spheroidal epithelial cells arranged in alveolar manner, without any stroma between the individual cells.

Such tumours are generally flat, a circumstance which helps to differentiate them from sarcomata in the same situation. These latter are, for reasons clearly given by Mr. Marshall, usually round. Since 1897, eight cases of metastatic carcinoma have been published.

DISEASES OF THE SKIN.

By J. WYLLIE NICOL, M.B., C.M.

On Trichophytin. By Marie Truffi (*Revue Pratique des Maladies Cutanées, Syphilitiques et Vénéériennes*, October, 1903).—The late Dr. Plato prepared "trichophytin" from the parasite of the trichophyton form of ring-worm, and investigated its action. His results were published after his death by Neisser in 1902 (*Arch. f. Derm. u. Syph.*, Bd. 60, Heft. 1). Dr. Truffi has now followed up his experiments, and has obtained somewhat similar results.

Dr. Truffi prepared trichophytin from cultures on Sabouraud's medium of different forms of the trichophyton fungus. The inoculation of animals with trichophytin after they had been subcutaneously injected with pure cultures of trichophyton produced no reaction, both when the trichophytin and the cultures inserted were from the same species and when they were from different species. Trichophytin produced no reaction in healthy individuals or in those suffering from skin affections other than trichophytosis, such as lupus, favus, and staphylococcic sycosis, but in those with trichophytosis a marked reaction occurred. It set in twelve to fifteen hours after injection with a rise of temperature, rapid pulse, prostration, headache, and sweating. At the site of injection on the arm there occurred a distinct reaction, with redness and induration, sometimes extensive and with vesiculation. There was a distinct local reaction at the site of the lesion in trichophytosis of the beard, especially in "sycosis à forme végétante," but not in trichophytosis of the scalp in children, except in one instance where the affected area was strongly irritated from previous treatment with croton oil.

Where a reaction occurred the cure seemed to take place in a shorter time than usual, and without a very energetic local treatment. Dr. Truffi considers that the severity of the reaction is too great a price to pay for this shortening. He, however, believes that it will be of use as an aid to diagnosis.

Like Plato, he obtained no reaction in favus patients by injections of "favin" prepared from achorion Schönleini.

Epicarín in Tinea tonsurans and Tinea circinata. By A. van Harlingen and H. K. Dillard (*Amer. Jour. Med. Sc.*, June, 1903).—The writers treated, with very satisfactory results, a series of cases with a 10 per cent alcoholic or soda solution, or, in obstinate cases, a 20 per cent solution. This was well rubbed into the shaven or epilated spots once or twice daily. In ringworm of the body epicarín was apt to irritate too much. They also employed a 10 per cent ointment, but consider the solution more useful.

A Case of Chronic Purpuric Erythema (Eight Years' Duration), with Pigmentation of Skin and Enlargement of Liver and Spleen. By Professor W. Osler (*Jour. of Cutaneous Dis. incl. Syphilis*, vol. xxi, No. 7, 1903).—The patient was a stonemason, aged 33. He had pneumonia as a child, inflammatory rheumatism when 12, and a short attack of malaria when 24. He had otherwise been healthy. When he came under observation he had suffered for eight years from a recurring erythemic purpura of the legs, leading to general pigmentation of the skin, with patchy erythema and purpura of the trunk and extremities, and with enlargement of the liver and spleen.

It began in September, 1901, with a few red spots about the ankles, and since then his legs have never been free from blotches and red and brown stains. The condition slowly extended up both legs, and finally to the arms. During the last twelve months he has had pain in the joints, chiefly on movement, sometimes sufficient to incapacitate him from work. There was no redness or swelling. The following description of the condition on the left leg gives the chief features of the eruption. These were—(1) A general deep-brownish pigmentation; (2) widespread areas of hæmorrhagic infiltration into the skin; (3) in places, localised raised areas of hyperæmia and hæmorrhage, like lesions of purpura urticans; (4) general scaliness. The skin everywhere felt hard and brawny. There was no fever.

The blood examination, on admission, showed the red corpuscles 5,000,000; leucocytes, 3,000 per c. mm.; hæmoglobin, 70 per cent; coagulation time, three minutes. Differential counts gave eosinophiles 8 per cent, small mononuclears 12 per cent, polymorphonuclears 74 per cent. Blood cultures were sterile.

He was treated for seven weeks by daily immersions for seventeen hours in the warm bath. The skin improved considerably, but fresh crops of hæmorrhage occurred. He was seen in February, 1902, when his condition was unchanged. He died in February, 1903, of pernicious malaria. There was no autopsy.

Professor Osler remarks that while recurrence in crops is a common characteristic of the erythema group, and he has reported a number of instances of recurrence of attacks during a long period of years, yet in this case scarcely a day passed without the appearance of fresh spots, and the chronicity was remarkable. Such an extraordinary degree of pigmentation is rare. From the uniform increase in size and the hardness, the condition of the liver was probably one of hypertrophic cirrhosis, and related directly to the recurring hæmorrhages. The numerous skin lesions in cirrhosis are rarely seen early in the disease. Recurring purpura, purpuric erythema and urticaria, sometimes quite large subcutaneous hæmorrhages are occasionally seen, more frequently in the hypertrophic form. Professor Osler thinks that there is a group of cases, of which this case is one, in which the recurring cutaneous hæmorrhage is the primary trouble, and leads to cirrhosis of the liver and enlargement of the spleen.

In the remarkable condition known as hæmochromatosis there is widespread destruction of the red blood corpuscles, leading to a pigmentation of the skin and a deposition of the iron-containing pigment in the internal organs, and in time to cirrhosis of the liver and pancreas, and finally to a diabetes—the so-called bronzed diabetes. In at least four of Auschutz's cases (*Dent. Archiv*

f. Klin. Med., Bd. 72) extensive purpuric eruptions occurred, and in one of Professor Osler's cases.

Professor Osler thinks that the arthritis, common in erythemic purpura, and usually regarded as rheumatic in its origin, may possibly be of a character similar to the arthritis described by surgeons in cases of extensive hæmorrhage, and of which he has seen two cases—one following a fracture of the kidney, and the other the recurring hæmorrhages into a pancreatic cyst.

Some Remarks on the Pathological Action of the Roentgen Rays, with Special Reference to the Literature on the Subject. By Dr. J. M. H. Macleod (*British Journal of Dermatology*, vol. xv, No. 10).—Histological examinations have now been made, after a varying number of exposures, of healthy skin in man and various animals; of skin lesions—such as lupus vulgaris, rodent ulcer and epithelioma in process of treatment; and of ulcers and telangiectatic scars resulting from the action of the rays. Bacteriological experiments have also been numerous. There is a certain degree of unanimity in the majority of the results.

It was at first believed that, like the actinic or chemical rays of the solar spectrum, they possessed the power of inhibiting the growth of micro-organisms both in the tissues and on cultures. This theory has now been definitely proved to be erroneous, so far as cultivations on artificial media are concerned, by the researches of Freund, Zeit, Wolfenden, Forbes Ross, and others. It does not necessarily follow that the rays may not be capable of indirectly interfering with the life of bacteria in living tissues. The bactericidal effect, the existence of which most observers will admit, is indirectly produced by the rays through the stimulation of a healthy reaction on the part of the tissues. Skinner suggests that the changes in the tissues render them unfit for the further growth of organisms. Freund and Pusey believe it to be the result of increased phagocytosis.

Dr. Macleod critically surveys a number of the histological investigations, and concludes by formulating the following tentative propositions as fairly representative of the present state of our knowledge:—

1. That the x-rays in small doses have a stimulating effect on the elements of the healthy skin.

2. That in large doses, by long exposures, close proximity of the tubes to the skin, or the employment of soft tubes (leaving out of consideration the undecided problem of the possible difference in the type of the rays obtained from hard and soft tubes), the rays are capable of devitalising the tissue elements, interfering with the process of reproduction and causing their degeneration; and that this power is the result of a direct specific action of the rays.

3. That the more highly differentiated structures, such as the hair follicles, glands, nails, and blood vessels are more readily and severely affected by the rays than the less differentiated epidermal cells or the fibrous stroma of the corium.

4. That pathologically altered cells, whether of epiblastic or mesoblastic origin, are far less resistant to the rays than healthy cells, and are devitalised with small doses of the rays; and that this destructive action on diseased elements may be taking place while the healthy elements in the neighbourhood, instead of having their vitality inhibited, may be stimulated to a process of repair.

5. That the action of the rays is cumulative, and that when the cellular degeneration reaches a certain degree the toxic products of the breaking down cells are capable of setting up an inflammatory reaction, which is a secondary phenomenon.

6. That this inflammatory reaction is peculiar in that it occurs in a tissue, the vitality of whose various elements has already been impaired by the action of the rays, and in that it is associated with greater destructive changes than those produced by the actinic rays, and is apt to lead to ulceration and necrosis, and is liable to be followed by an imperfect process of repair.

Books, Pamphlets, &c., Received.

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- The Medical Annual: A Year-Book of Treatment and Practitioner's Index. 1904. Twenty-second year. Bristol: John Wright & Co. (7s. 6d. net.; and Stereoscope, 2s.)
- A Practical Guide to the Administration of the "Nauheim" Treatment of Chronic Diseases of the Heart in England, by Leslie Thorne Thorne, M.D., B.S.Dur. London: Baillière, Tindall & Cox. 1904. (2s. 6d. net.)
- Lectures, chiefly Clinical and Practical, on Diseases of the Lungs and the Heart, by James Alexander Lindsay, M.D. London: Baillière, Tindall & Cox. 1904. (9s. net.)
- Medical Monograph Series—No. 2, The Bacteriology of Every-Day Practice, by J. Odery Symes, M.D. Second Edition. No. 8, Insanity in Every-Day Practice, by E. G. Younger, M.D. London: Baillière, Tindall & Cox. 1904. (Each 2s. 6d. net.)
- Keltic Researches: Studies in the History and Distribution of the Ancient Goidelic Language and Peoples, by Edward William Byron Nicholson, M.A. London: Henry Frowde. 1904. (21s.)
- Diseases of the Eye, by L. Webster Fox, A.M., M.D. With 5 Coloured Plates and 296 Illustrations in the Text. London: Sydney Appleton. 1904. (18s. net.)
- Contributions to Practical Medicine, by Sir James Sawyer. Fourth Edition, with many Revisions and Additions. Birmingham: Cornish Bros. 1904.
- The Physiological Feeding of Infants: A Practical Handbook of Infant Feeding, and Key to the Physiological Nursery Chart, by Eric Pritchard, M.A., M.D. Second Edition, greatly Enlarged and entirely Rewritten. London: Henry Kimpton. 1904. (3s. 6d. net.)
- Blood Immunity and Blood Relationship: A Demonstration of certain Blood Relationships amongst Animals by Means of the Precipitin Test for Blood, by George H. F. Nuttall, M.A., M.D. Including Original Researches by G. S. Graham Smith, M.A., M.B., and T. S. P. Strangeways, M.A., M.R.C.S. Cambridge, at the University Press. 1904. (15s. net.)
- Stretcher Drill. Illustrated. Second Edition, by Major J. J. de Zouche Marshall. Teddington: T. W. Childs. 1904.
- Philadelphia Hospital Reports. Vol. V, 1902. Edited by Herman B. Allyn, M.D. Philadelphia: Maurice H. Power. 1903.
- Football Injuries, by R. H. Anglin Whitelocke, M.D. London: J. & A. Churchill. 1904. (1s.)

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FOUR WEEKS ENDING 19TH MARCH, 1904.**

	WEEK ENDING			
	Feb. 27.	Mar. 5.	Mar. 12.	Mar. 19.
Mean temperature, . . .	39·8°	35·0°	36·6°	42·2°
Mean range of temperature between day and night, . .	9·3°	9·6°	13·9°	13·4°
Number of days on which rain fell, ...	4	1	3	5
Amount of rainfall, . . ins.	0·67	0·02	0·13	0·21
Deaths registered, . . .	344	344	359	373
Death-rates, ...	22·5	22·5	23·5	24·4
Zymotic death-rates, . . .	2·4	2·1	1·7	2·7
Pulmonary death-rates, . .	7·5	6·8	7·2	7·8
DEATHS—				
Under 1 year, ...	83	69	71	85
60 years and upwards, . .	65	82	84	87
DEATHS FROM—				
Small-pox, ...	2	1	2	4
Measles, ...	19	10	10	15
Scarlet fever, ...	2	1	1	...
Diphtheria, ...	1	2	3	1
Whooping-cough, ...	5	6	3	6
Fever, ...	3	1	1	6
Diarrhoea, ...	5	11	5	9
Croup and laryngitis, . .	1	1	1	...
Bronchitis, pneumonia, and pleurisy, ...	101	85	86	105
CASES REPORTED—				
Small-pox, ...	30	19	21	46
Diphtheria and membranous croup, ...	15	11	14	13
Erysipelas, ...	19	17	16	19
Scarlet fever, ...	32	28	33	42
Typhus fever, ...	...	...	...	...
Enteric fever, ...	15	21	32	22
Continued fever, ...	...	...	...	1
Puerperal fever, ...	3	1	1	4
Measles,*	387	340	414	299

* Measles not notifiable.

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ORIGINAL ARTICLES.

ON THE USE OF ALCOHOL AS A MEDICINE.¹

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AND

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[DR. MONRO.]

TIME brings about many changes in the principles and practice of medicine—in some instances slowly, and in others very quickly. We have an example of rapid changes in practice in the case of potassium bromide, which was introduced into the *London Pharmacopœia* in 1835, because of its supposed value in splenic enlargements; was removed from it in 1851, as inert and useless; and entered again into favour in 1857 and later years, on account of its value in epilepsy. It is now well known as the sovereign remedy for that disease, and the

¹ Introduction to a discussion at the Glasgow Southern Medical Society on 31st March, 1904. It is to be noted that the question of alcoholic drinks as beverages was entirely outwith the scope of the discussion, and was not considered by any of the speakers.

consumpt of this drug at the National Hospital for the Paralysed and Epileptic in one recent year was reported as amounting to more than a ton and a half.

The way in which drugs, both new and old, fall from positions of esteem is so well known to all that no example need be mentioned. An instance of change in our views as to the action of a medicine is seen in the case of *digitalis*, which not very many years ago was regarded as a narcotic and cardiac sedative. It was supposed to be of value in weakening the pulse when the heart was beating too strongly, and to be dangerous when the pulse was weak and irregular. I need scarcely remind you that these opinions are almost exactly the reverse of those which justly prevail at the present day.

A revolution just as striking as any of those I have mentioned can be witnessed in the views of medical men as to the therapeutic usefulness of alcohol. In one or more aspects, this revolution is already almost completed; in others it is incomplete, though making progress. Alison of Edinburgh, a teacher of Sir William Gairdner, urged in the twenties of last century the propriety of *supporting* fever patients instead of *depleting* them (*e.g.*, by blood-letting), and two of his pupils, Graves and Stokes of Dublin, went to considerable lengths in the use of alcohol as a stimulant. This practice spread, and received powerful support from the teaching of Liebig in 1858, that alcohol is a food. The well-known Dr. Robert Bentley Todd of King's College Hospital, pushed this mode of treatment to an extreme, and gave as much as 48 oz. of brandy per diem to a girl of 18 with pneumonia and enteric fever.¹ Although she became drowsy—in consequence, as Todd himself suspected, of “over-stimulation”—he kept up this dosage for twelve days (except on two days, when he reduced it temporarily to 36 oz., with, as he thought, unsatisfactory results). This practice is now obsolete, and the man who, more perhaps than any other, was influential in showing how undesirable the results were, was Sir William (then Dr.) Gairdner, formerly physician to the Glasgow Fever Hospital.

The following statistics, selected from Gairdner's writings,² show how fully justified he was in asserting that typhus, in young subjects at least, needed no stimulation by alcohol:—

¹ *Clinical Lectures*, 1861, second edition, p. 122, Case 24.

² *On Alcoholic Stimulation*, Edinburgh, 1869; *The Physician as Naturalist*, &c., Glasgow, 1889.

Glasgow Fever Hospital— years immediately before Gairdner's appointment,	1861, 1862,	MORTALITY AT ALL AGES.		IN THE YOUNG.	
		18'86 per cent.		3'2 per cent.	
Glasgow Fever Hospital— cases treated by Dr. Gairdner in 1862-63, . . .	...	11'93	„ less than 1'0	„	„
London Fever Hospital, . . .	...	20'89	„	6'2	„
Various hospitals, including Glasgow (statistics col- lected by Murchison), . . .	...	18'0	„	...	„
Todd's cases (quoted by Murchison), . . .	...	25'0	„	c. 17'0	„

Gairdner's cases included 189 in persons under 16 years of age, and of these only 1 died, viz., a child who was admitted moribund, and was not seen during life by Dr. Gairdner. Alcohol was given in 1 case only of the 189, but this was long after the fever had run its course. The patient was a child with cancerum oris and great debility of the stomach.

Gairdner calculates that, if his 189 young patients had died at the same rate as in the

Glasgow Fever Hospital (1861-62), there would have been 9 deaths instead of 1.
 London Fever Hospital, „ „ c. 12 „ „
 King's College Hospital (under Todd) „ „ 30 to 35 „ „

But nowadays, for one patient who gets alcohol as a food, there are probably a dozen or more who get it as a cardiac stimulant. Alcohol, in a pretty strong solution, by irritating the mucous membrane of the stomach and of the mouth, causes not only local dilatation of blood-vessels, but also a rise of the general blood-pressure, and therefore an increase in the velocity of the intracranial circulation. We can thus understand the utility of brandy and whisky in cases of fainting, particularly as one or other of these is generally at hand; but it has been found that 15 drops of tincture of capsicum will cause a rise of blood-pressure even less transient, and therefore more satisfactory, than that caused by $\frac{1}{2}$ or $\frac{1}{4}$ of an ounce of whisky. But it is obvious that reflex stimulation of the circulation, by the application of an irritant to the mucous membrane of the digestive tract, is not a procedure which it is desirable to keep up for days or weeks. The unsatisfactory and even risky nature of this treatment is emphasised by an experiment of Briggs,¹ which showed that the rise of blood-pressure in a temperate adult, after $\frac{1}{2}$ to 1 oz. of whisky, never lasted more than thirty minutes, and was followed by a slight but more lasting fall *below the previous level*. Clearly, this is not the kind of stimulation we want in acute or exhausting

¹ *Bull. Johns Hopk. Hosp.*, 1903, p. 36.

disease. We want something that will act directly upon the cardiac muscle or ganglia.

I fancy we were all trained as students to regard alcohol as a cardiac stimulant of the kind just indicated—a stimulant which, if it did not actually add to the energy of the cardiac muscle, would encourage it to use more freely such reserve of strength as it possessed, and would postpone the risk of final collapse until the natural decline of the fever, aided by feeding, nursing, and medicines, should set aside that risk, and allow the exhausted organ to recuperate. Of all aspects of the alcohol question—so far as therapeutics are concerned—this is by far the most important. Is alcohol a cardiac stimulant or not? I submit that the experimental evidence is strongly against alcohol, while the clinical evidence is, at the least, not very favourable.

Ringer and Sainsbury,¹ experimenting on the different alcohols by means of an isolated frog's heart, fed with bullock's blood, found that they all arrested the heart in diastole. I quote these words from their report:—"It is to be noted that, by their direct action on the cardiac tissues, these drugs are clearly paralyzant, and that this appears to be the case from the outset, no stage of increased force of contraction preceding."

Experiments carried out by Martin and Stevens² in 1887, on the isolated dog's heart, also showed that diluted ethyl alcohol poisoned the cardiac muscle tissue, though it possibly acted, in addition, on the coronary arteries. The result was greater and greater stretching of the ventricular wall, with less and less complete systole, until the distended heart filled the pericardium and could stretch no more.

The most striking experiments, however, are those of Hemmeter,³ who isolated the heart and lungs of dogs, supplied them with defibrinated calf's blood or dog's blood, and measured the quantities of blood pumped around by such hearts, under varying conditions, in periods of thirty seconds each. One observation may be quoted as illustrative of the series:—

Supplied with non-alcoholised blood, the heart propelled 196 c.c. in 30 seconds.			
1 minute after alcoholised blood was turned on, it	"	186	" "
3 minutes	" "	175	" "
6 "	" "	162	" "
7 "	" pure	194	" "
3 "	" alcoholised	174	" "

This experiment was made with 0·2 per cent methyl alcohol.

¹ *Practitioner*, 1883, vol. i, p. 339.

² *Studies from Biol. Lab. Johns Hopk. Univ.*, 1887, vol. ii, p. 213.

³ *Studies from Biol. Lab. Johns Hopk. Univ.*, 1889, vol. iv, No. 5.

Ethyl alcohol was not quite so hurtful, the loss of work in thirty seconds amounting to 17.45 c.c. with ethyl, as compared with 19.46 c.c. with methyl alcohol.

The diminution in the work done by the heart when supplied by alcoholised blood was accounted for by dilatation and imperfect systole.

There was no change in the pulse-rate which could be attributed to the alcohol employed.

These very important results of Ringer and Sainsbury, Martin and Stevens, and Hemmeter, are quite in accordance with the teaching of a more recent English writer, Leonard Hill,¹ who says that alcohol diminishes the systole and increases the diastole. When the dilatation of the heart has become so great that the organ fills the pericardium, cutting the latter gives temporary relief, but at last the movements cease in diastole.

How, then, did alcohol come to be so generally regarded as a cardiac stimulant? The question has been answered for us by Sir Samuel Wilks,² who says that "those who in times past gave it and found it useful were totally mistaken as to its action. They believed they gave a stimulant instead of a sedative, when they found it beneficial in such a case as fever, with high temperature, quick pulse, &c. This mistake led it to be so universally given in all cases of disease. If alcohol gave strength, there was no morbid state in which it was not useful." For my own part, I used to give alcohol freely in pneumonia, the principal fever with which we have to deal in a general hospital, but the results were disappointing. For the past two years or so I have scarcely given it at all in that disease, except occasionally as a narcotic or sedative, for instance at the crisis, and I am convinced that the patients have not suffered. I am disposed to think that they have benefited.

Another important group of cases consists of those in which the heart muscle is failing as a late result of chronic valvular disease. It is probably still the general practice to give alcohol to such patients, and yet Wilks³ pointed out a dozen years ago that its influence in cardiac cases, with orthopnoea, dropsy, and engorgement of viscera is harmful. For such patients, mercurial purges, leeches, nux vomica, and often digitalis, are immeasurably superior to alcohol. It is noteworthy how many of these patients object to alcohol, not,

¹ Schäfer's *Text-Book of Physiology*, 1900, vol. ii, p. 52.

² *British Medical Journal*, 1891, vol. ii, p. 462.

³ *Loc. cit.*, p. 463.

apparently, because they do not like it, but because they recognise that they are none the better of it. Some patients, on the other hand, ask for it, but probably even these will be satisfied with a short course of the drug. I should say that patients of this group are at least as well without alcohol. If alcohol, taken in liberal quantities, weakens the heart of an otherwise healthy individual, it can scarcely be expected to strengthen a heart that is already weakened.

A phenomenon which gives us some concern in the later stages of fever is a great fall in the tension of the pulse, which becomes dicrotic, fully dicrotic, or even hyperdicrotic. When the blood-pressure is so much reduced, there can be no great stability in the supply of blood to the heart itself, or to the nerve centres in the medulla. The question then is—Can alcohol help us here? Observation shows that in intoxicating and deadly doses alcohol causes a fall in blood-pressure. With regard to small doses, opinions differ so widely as to make it probable that these doses make very little difference one way or another. Nevertheless, the most recent researches point to the absence of any rise, and to the occurrence of a distinct fall, in pressure. If alcohol is given by the mouth, or by the rectum, or hypodermically, it causes a reflex rise owing to the tissue irritation it produces; but if this irritant effect is eliminated—*e.g.*, by giving a considerable amount of alcohol hypodermically, but diluted with plenty of normal saline solution—there is no rise; whereas true stimulants given in this manner cause a rise. We may take it, then, that absorbed alcohol cannot raise the blood-pressure, whether that pressure is normal or below normal to begin with.

The rapidity of the pulse is another point that has to be considered. Opinions differ widely as to the influence of alcohol on the pulse-rate. Some say that it causes (1) acceleration; others say (2) slowing; others (3) acceleration followed by slowing; others (4) slowing followed by acceleration; and others (5) little or no change. Parkes, as a result of his earlier researches, adopted the first of these five theories, while his later researches led him to adopt the third. The diversity of opinion seems to depend largely on the existence of remarkable differences between different individuals. Anstie, in his work on *Stimulants and Narcotics* (1864), showed that a great increase of rapidity after alcohol was much more marked in the lower mammals than in man. Dr. Findlay carried out many observations in connection with this subject on patients in my wards, and the net result of his and of the earlier recorded experiments appears to be that

frequently, but not always, there is a slight and transient increase in the pulse-rate. The total for the whole twenty-four hours, however, is not increased; occasionally, indeed, it is diminished. Parkes found that exercise greatly increases the pulse-rate of those who have taken alcohol—an observation which is not in favour of that drug.

One other matter has to be alluded to, viz., the influence of alcohol on temperature. It has been supposed by some that alcohol retards tissue metamorphosis to such a degree that it acts as an antipyretic. The most satisfactory evidence goes to show that any such action, if it occurs at all, is quite insignificant. At the same time, through its power of causing vasomotor paralysis, and thus relaxing the cutaneous blood-vessels, large doses of alcohol are capable of exerting a very important influence on temperature, but the result depends upon the temperature of the external medium. The skin, when rendered hyperæmic by vasomotor relaxation, is a better conductor of heat than normal skin, and thus allows the temperature of the body to approximate to that of the surrounding atmosphere more nearly than in health. It thus happens, on the one hand, that very low temperatures are found in intoxicated persons who have lain out through a winter's night, and, on the other hand, that alcohol in hot climates predisposes to sunstroke. Apart, however, from its influence on the vasomotor system, we may discard any antipyretic effect of alcohol as insignificant, or non-existent.

After all this destructive criticism, I wish to point out that alcohol has properties which, under certain circumstances, may be very useful, although, as a rule, we can obtain similar results in disease by means of other agents which are free from the objections that may be urged against alcohol. For instance, whisky may with advantage be applied to the lips in syncope to cause a reflex rise in the blood-pressure. Sometimes it proves a suitable narcotic. It may also be given in cases where, after severe exposure, the surface remains persistently cold after the individual has been brought into a warm atmosphere; here, after absorption, it relaxes the cutaneous vessels by causing vasomotor paresis. It might be used to relieve the pain of neuralgia or dysmenorrhœa, but in such conditions it is a dangerous remedy, because the dose is likely to be often repeated; fortunately, better remedies are available.

To sum up, then, alcohol is a medicine with certain useful properties, but the limitations of its usefulness are far greater than is ordinarily supposed; and, even where it is useful,

there are generally other remedies which are also useful, and at the same time more safe.

[DR. FINDLAY.]

In studying the physiological action of alcohol on the cardio-vascular system, one is more impressed with the harmlessness than with the harmfulness of this agent; indeed, it is a matter of perpetual wonderment to see how large and even enormous quantities can be borne with comparative impunity. When, however, the circulatory system is in a state of disease, alcohol, with few exceptions, is not only useless as a remedial agent, but is worse than useless, for it is frequently positively harmful. In a state of perfect health, the cardio-vascular system has a large reserve to draw on; in disease, this system is frequently working with the merest margin, or with no margin at all, and to give alcohol is to destroy that margin or to upset the balance altogether.¹ Thus, Dr. Monro has already alluded to the fact that alcohol frequently causes a distinct fall in blood-pressure; and further, Crile,² in experimenting on dogs reduced to a state of shock ("exhaustion of the vasomotor centre"), found that the most constant and the most marked effect of alcohol was a decline of the blood-pressure, the rapidity and the extent of which were proportional to the depth of the shock and the dosage of the alcohol employed. When considerable dosage had been given, the final breakdown of the circulation was more sudden than in the control animals.

Alcohol, even in small doses, is a vaso-dilator, and though it causes some loss of tone in the vessels of the body generally, it exerts its dilating influence principally on the vessels of the skin, and at the same time increases the rate of blood-flow within the cranium. This dilatation of blood-vessels is preceded by no vaso-constriction, unless alcohol be given in such a manner as will evoke reflex effects.³ Alcohol is of therapeutic use in all conditions of arterio-capillary spasm, but the only advantage it has over other drugs of this type is that it is ubiquitous. It is insisted by most authorities that alcohol is never at any time a stimulant of the vaso-constrictors, but

¹ J. Swientochowski, *Zeitschr. f. klin. Med.*, 1902, Bd. 46, SS. 284-310 (quoted in *Internat. Monatsschr. zur Erforschung des Alkoholismus und Bekämpfung der Trinksitten*, 1903, S. 33).

² *Boston Med. and Surg. Jour.*, 1903, p. 248.

³ J. C. Hemmeter, *Trans. Med. and Chir. Fac. State of Maryland*, 1889, pp. 230, 231.

Lauder Brunton¹ suggests that in fevers alcohol may increase the power of the weakened vasomotor centre, either by acting upon it directly or by augmenting its blood-supply, and may thus give greater tone to the blood-vessels and raise the pressure within them. But it may be seriously questioned whether alcohol confers any benefit by increasing the cerebral blood-supply, for, as most authorities hold, and as Lauder Brunton himself elsewhere admits, alcohol has a paralysing influence on the nerve-cells themselves. Accordingly, the more quickly the alcoholised blood flows past the nerve cells, the more alcohol is brought in contact with them, and the sooner will they succumb to its narcotising influence. Besides, there is no longer any reason to imagine that alcohol may raise the blood-pressure when it has been indubitably shown that alcohol, if it affects blood-pressure at all, can only lower it.²

Binz³ declares that the vessels of the skin are usually greatly contracted in high fever, hence the benefit of alcohol. Now, in the initial stage of fever, during what we term the rigor, there is vaso-constriction, and here, though there is no urgency about the condition, a dose or two of alcohol may contribute greatly to the patient's comfort by inducing vaso-dilation. But in the later stages and anxious periods of most fevers, there is already well-marked vaso-dilation, and, indeed, this of itself constitutes a distinct menace to life, for it would appear that the muscle of the vessels plays an important part in the onward propulsion of the blood, and, according to Pässler and Romberg,⁴ death in the infections comes about from paresis of the constrictors of the small vessels, apart altogether from cardiac disability. Alcohol, however, cannot amend this state of matters; it is no more a vascular tonic than it is a cardiac tonic. At the same time, alcohol may not make matters worse in this respect, for frequently the fever has already dilated the vessels to a maximal degree, and no further vaso-dilation can be observed after alcohol. In cases of arterio-sclerosis, also, we find that alcohol can exert no influence, or but an insignificant dilating action on the rigid blood-vessels, just as we know that in these same cases digitalis can exert no considerable constrictor action.

¹ *Practitioner*, 1876, xvi, 130.

² H. W. Cook and J. B. Briggs, *Johns Hopkins Hospital Reports*, 1903, vol. xi, pp. 518-524; J. J. Abel, *A Critical Review of the Pharmacological Action of Ethyl Alcohol, &c.*, Boston, 1903 (quoted by Cook and Briggs, *loc. cit.*).

³ *Lectures on Pharmacology*, New Syd. Soc. Transl., 1895.

⁴ *Kongress f. innere Med.*, 1896 (quoted by Rosenfeld, *Der Einfluss des Alkohols auf den Organismus*, 1901, S. 52).

Much diversity of opinion has been expressed regarding the effect of alcohol on the pulse-rate, but the most careful work of the last fifteen years shows beyond a doubt that, even in quantities sufficient to produce transient disturbance of the mental faculties, pure ethyl alcohol diluted with water has practically no influence on the pulse-rate of healthy men.¹ So certain is this that we may with confidence assert that, if half a glass of whisky accelerates the pulse to any appreciable extent, then the owner of that pulse is not in a condition of perfect health. The strength of the pulse in the healthy likewise remains unchanged, though the pulse may feel fuller to the examining finger. No support can be found for the view that there is ever any increase in the pulse tension after alcohol, either in health or in disease.² Alcohol cannot slow the abnormally rapid pulse of disease, unless that rapidity is due to some functional disturbance which the narcotising influence of alcohol can quiet. There is not a particle of evidence to prove that alcohol can stimulate the vagus mechanism, and, indeed, so far as we can find, absorbed alcohol is unable to influence any of the cardiac nerves.³ Speaking somewhat generally, it may be said that the pulse-rate depends on the condition of the cardiac pump—the heart, and on the state of the blood-vessels. Dr. Monroe has already shown that at no stage of alcoholisation is the cardiac muscle stimulated, and that in large doses alcohol acts on the muscle fibre of the heart as a deadly poison.⁴ I have already mentioned that alcohol cannot help the circulation by tightening up the greatly relaxed blood-vessels in the severe infections, though it has also been pointed out that alcohol may be unable to make matters worse so far as the blood-vessels themselves are concerned. In these cases of high fever the heart beats very quickly, for, in order to deliver a sufficient quantity of blood to the tissues through dilated vessels, an enfeebled heart can only do so, or attempt to do so, by contracting more frequently, and it may be said that the frequency of the pulse bespeaks the urgency of the cardiac enfeeblement. If alcohol be given under these circumstances,

¹ Hemmeter, in 1889 (*Trans. Med. and Chir. Fac. State of Maryland*, 1889, p. 230) made such a statement, and further research has but confirmed the truth of it. Meyer (*Bericht über d. vii. internat. Congr. gegen d. Alkoholismus*, 1902, S. 43) and Rosenfeld (*Der Einfluss des Alkohols auf den Organismus*, 1901, SS. 50-52) express a like opinion.

² T. K. Monroe and J. W. Findlay, "Alcohol and the Cardio-vascular System," *Med. Temp. Review*, 1904, p. 39.

³ *Ibid.*, p. 78.

⁴ *Ibid.*, 1903, pp. 331-335 and 361-374.

it can only cause further embarrassment to the heart; the blood-pressure, unless the heart can put on a still quicker pace, or even in spite of a quicker pace, invariably falls. If the disease has already so seriously affected the cardiac musculature that the further disabling action of the alcohol on the muscle of the heart cannot be compensated for by an increase in the pulse-rate, then the heart gives in—throws up the sponge, so to speak—and beats irregularly and slowly.¹

Though all the newer research has given, or should have given, the death-blow to alcohol as a cardiac stimulant, we are by no means finished with the alcohol question. Not so very long ago, alcohol was extolled as almost a specific in sepsis and the infections, and at this moment many look on alcohol as a remedy capable of neutralising microbic toxins, while others hold that to give alcohol in these conditions is but adding fuel to the fire.² Clinical experience in this field is most contradictory, and even laboratory results do not give us the positive information we desire. Several observers have shown that alcohol renders animals more susceptible to microbes and their toxins; they show that alcoholised animals are immunised with difficulty or not at all, and that the continued administration of alcohol causes animals to quickly lose any immunity they may have acquired.³ But these results teach us nothing that we can make use of for man, since we find that, had a man received as much alcohol in proportion to his weight as these unfortunate animals received, he would have been drinking not much less than half a bottle, and sometimes even more than three bottles of 50 per cent brandy in the twenty-four hours.⁴ Now, these large quantities of alcohol caused digestive disorders, emaciation, hypothermia, and other disturbances in the animals experimented on, so that additional factors are introduced to prevent us transferring *in toto* these results to man. Nevertheless, it appears to be pretty well proved and accepted that alcoholism in man predisposes the body to infection by various microbes, and we might quite logically infer that, since this is so, it must be equally true that alcoholic therapeutics will predispose to an extension of the morbid process, which is merely a continued infection and invasion of other and surrounding tissues. Such reasoning, however, is not altogether

¹ J. Swientochowski, *Zeitschr. f. klin. Med.*, 1902, Bd. 46, SS. 284-310.

² Pearce Gould, "Alcohol in Surgery," *Practitioner*, 1902, vol. lxix, p. 573.

³ Sims Woodhead, "The Pathology of Alcoholism," *Med. Temp. Review*, 1903, p. 105 *et seq.*

⁴ *Glasgow Med. Jour.*, 1904, vol. lxi, pp. 237, 238.

justified by experimental results; still, support is lent to such a view by some of the most recent researches, though, with therapeutic doses—equal to from about 2½ to 4 oz. of 50 per cent brandy for a man—results are not so telling against alcohol.¹

It is pretty well settled that alcohol diminishes the alkalinity of the blood, and it is known that diminished alkalinity of the blood goes hand in hand with increased susceptibility to infection; consequently, we must probably regard this diminished alkalinity, that alcohol can cause, as a factor likely to interfere with the acquirement of immunity. Woodhead and others consider it proved that alcohol interferes with phagocytosis, and diminishes and may even abolish the bacteria-destroying (bacteriolytic) power of the blood, though only the other month the well-known American pharmacologist, Hobart Amory Hare,² brought forward experimental evidence showing that alcohol enhances this power. This whole question is still to a great extent *sub judice*. Alcohol has been wrested from many a proud position by the hardest of hard and painstaking work, but its vitality is tremendous, and as soon as it is dislodged from one high place it turns up in another. Indeed, so tremendous is this vitality of alcohol, that one feels almost compelled to believe that it must be more than a narcotic, vaso-dilator, and reflex stimulant; but it has yet to be proved that alcohol can play the rôle of an antitoxine or a generator of antitoxines.

CASE OF "HYSTEROID" DISEASE IN THE MALE.

By JAMES W. ALLAN, M.B.,
Physician, Glasgow Royal Infirmary.

THE following case has been termed "hysteroid" for want of a better term. It presented symptoms of a somewhat anomalous character. The diagnosis is merely a provisional one, and open to revision.

Hugh S., æt. 27, leather currier, admitted to Ward 1 of the Glasgow Royal Infirmary on 10th October, 1901, under my care.

¹ *Glasgow Med. Jour.*, 1904, vol. lxi, p. 238.

² *Therapeutic Gazette*, 15th May, 1903.

When patient was admitted, Dr. Pepper was acting house physician, and the following notes in the Ward Journal are by him:—

Complaint.—Spasms of difficulty in expiration.

Family history.—Father and mother alive and well; two sisters alive and well; no brothers; no family history bearing on the case.

Previous health has always been good, except four years ago, when he had for a short time the same complaint as he now suffers from. At this time there were only two spasms, one lasting five hours, and another, a fortnight after, lasting two hours. Since then, it quite disappeared until lately. He has been subject to attacks of mild sore throat, not sufficient to cause him to leave off work. He is temperate in his habits, is not exposed at work, and the latter is not hard manual labour.

Present attack first began about three weeks ago. He had had a sore throat all the week, and, on the Sunday night, feeling feverish, and having headache, and sore throat, he went to bed and remained there till Tuesday, when he suddenly took a spasm. It is worthy of note that the spasms he took four years ago were not connected with a sore throat or any other symptoms whatever. During the last three weeks, he has had several spasms. There was one shortly after admission. The spasm consists of a sudden and complete stop in the middle of expiration. The abdominal muscles are violently contracted in a continuous spasm, and all the patient's efforts for some seconds fail to expel air through the glottis. When the patient has become cyanosed, the act of expiration is suddenly performed, and immediately several hurried inspirations and expirations, full and free, are taken till the cyanosis disappears. There is, however, no rhythm or regularity in this. Sometimes several successive expirations are cut short in the middle, and then in a second or two completed by apparently a great effort on the part of the patient.

Circulatory system: Pulse.—The left is markedly smaller than the right. *Heart* healthy.

Respiratory system.—There is no cough or spit, and no abnormal physical signs over the lungs except opposite the eleventh rib at the base of the left lung, where a loud coarse râle is heard at the end of inspiration.

Urine contains albumen, blood, and pus.

Temperature normal.

13th October, 1901.—Dr. Allan saw the patient suffering from a spasm at the morning visit yesterday. During the

spasm, patient's appearance was that of one who was making a supreme muscular effort, and holding the breath in order to fix the muscles, the face getting very red and the heart acting violently. The reddening of the face was very marked, and the face was bedewed with perspiration. The pupils did not present anything noteworthy. Consciousness did not seem to be at all affected. There was no clonic spasm noted. In some respects, the seizure was not unlike the early or tonic spasm of epilepsy, but it was not preceded by any cry, and it was not succeeded by any twitching or working of the muscles of the face or biting of the tongue.

The causation of this malady is still to seek. There is evidently spasm of the glottis, but whether this is due to hysterical, hysteroid, or epileptic mischief, or, it may be, to irritation of the pneumogastric caused by pressure from a neoplasm or aneurysmal swelling, remains to be seen.

So far as the family history has been ascertained, there does not seem to be anything pointing to a neurotic taint. Patient never received any injury to head or spine.

Patient denies having any drug habit. He denies having either micturition or defæcation during his spasm. On enquiring as to premonition, he at first said "No," but subsequently admitted that he felt a lump in the stomach which did not move up into the throat, but remained in the epigastrium. Patient never has a sensation of a lump in his throat or flatulent eructations.

Patient denies emotional instability, such as fits of laughing, crying, or bad temper, but he admits crying during his sleep, and this has sometimes wakened him.

Patient has not had much suffering from his illness, except in connection with passing water, when he has had pain at the end of the act, and he has observed the urine coloured with blood. He has had to get up nearly every hour to micturate during the night.

Dr. Pepper, Nurse Hentz, and Dr. Allan have the impression that there is a turning of the head to the right side during a seizure; at least this tendency has been observed by all three. Patient never had a spasm during sleep. The spasm is not of the nature of laryngismus stridulus. (Dr. Pepper states, however, that on one occasion there was crowing both on inspiration and expiration.) Patient never had any attack of asthma.

While this note was being made, patient took another spasm similar in character to those already recorded. It is to be

noted that the expiratory effort ends in a sound like that of hawking or clearing the throat, and there is also sometimes a sort of sobbing cry. It is also observed to-day that the head and right shoulder are drawn together.

Patient got a good whiff of chloroform, and this has at least temporarily arrested the spasm. The relief from the chloroform, however, is only temporary, as the spasmodic action has returned, though to a less degree.

Patient is to have 1 drachm of bromide of potassium morning and evening until further notice.

15th October.—Patient got 1 drachm doses of bromide of potassium on Sunday night, Monday morning and evening, and this morning. There has been only one seizure during this period. It occurred last night, and Nurse Copeland saw the attack, but not from the very beginning. She noted that the face was very red, the breath held; also that the head was flexed to the right, and the right shoulder raised to meet the head. The attack lasted altogether about twenty minutes.

Patient to have 1 drachm of bromide of potassium morning and evening until further notice.

16th October.—Patient had no fit yesterday.

Note by Dr. Allan: 18th October.—Patient has had 1 drachm of bromide of potassium morning and evening since evening of 13th October.

Patient has had only one spasm (already noted under date 15th October). In addition, he states that he felt a kind of swelling of the stomach on the 16th, but it went no further.

He is now to have 1 drachm of bromide of potassium each evening only.

The following notes are by Dr. A. B. Laidlaw, who now came on duty as my house physician:—

20th October.—Since last note, patient has had no recurrence of the fits, and is consequently feeling much better.

21st October.—To-night patient was seized suddenly with a fit of dyspnoea. . . . Patient's face became very red, the perspiration became very marked, the eyes suffused with tears, the pupils partly dilated, whilst the great veins of the neck were noticed to stand out like whipcords, and to pulsate violently. The lips were deeply cyanosed, while a scanty flow of saliva exuded from the mouth. Patient sat up in bed with his hands tightly clasped round his knees, and as the spasm reached its height the head was at one time thrown well back,

whilst at others it inclined to the left side, and less seldom to the right. . . . During the height of the spasm, the radial pulse is completely absent on both sides, but when the spasm is subsiding the pulse becomes gradually stronger. . . . This attack lasted for twenty minutes, and patient gradually quietened down until a quarter of an hour later, when he was seized with another attack similar to the one above described. This second attack lasted for twenty-five minutes.

22nd October.—Patient had another spasm this morning. It was not so severe as the two he had the previous night, and lasted for about fifteen minutes.

24th October.—Patient had a fit to-night lasting for nearly an hour. This was succeeded by one of shorter duration.

It has to be noted that these fits never occur during sleep, and when patient was left alone to-night the second fit stopped.

25th October.—Bromide of potassium now stopped.

27th October.—Patient had a slight recurrence of the fits to-night, but no apparent notice was taken of it, and the fit did not become severe.

29th October.—Patient had another spasm to-night, lasting for about twenty minutes.

8th November.—The prolonged observation of this case has led us to the conclusion that the disorder is probably functional in character. At the same time, while we regard the manifestations as hysterical, it is borne in mind that there may be some organic mischief underlying them. There has so far been no indication of any localised nervous lesion.

10th November.—Patient had three slight spasms to-day, but these were of short duration, probably owing to the fact that they were apparently ignored.

17th November.—Patient had two slight spasms to-day.

19th November.—Patient has been allowed up since 18th, and has had a spasm each night after supper on going back to bed.

4th December.—Patient has had no spasms since last note, and was dismissed to-day.

MOVABLE DISPLACEMENTS OF THE KIDNEY.

By DAVID NEWMAN, M.D., F.F.P.S.G.,
Surgeon, Glasgow Royal Infirmary.

(Continued from p. 275.)

The pathological anatomy of the displaced kidney depends upon whether the ailment is what we call "movable kidney," or what has been termed "floating kidney." I consider that the former term should be limited to those instances in which the kidney is movable behind the peritoneum, and the latter to the cases in which there is a distinct mesonephron attaching the organ to the spine and permitting the kidney to move freely within the cavity of the abdomen, so that it cannot be reached by operation without opening the peritoneum. At present our attention will be limited to "movable kidney," of which I have seen over 180 cases, whereas of "floating kidney" I have been able to discover only two instances.

The pathological anatomy of movable kidney may be considered under the following heads:—

I. Changes in the condition of the adipose capsule.

II. Changes in the attachments, especially in the ligamentum suspensorium renis.

III. Changes in the condition of the peritoneum and in its relationship to the kidney.

IV. Alterations in the structure or relationship of the (a) ureters, (b) vessels, and (c) nerves.

V. Changes in the parenchyma of the kidney and the fibrous capsule.

VI. Changes in other abdominal organs.

The changes which take place when a kidney becomes movable are not necessarily limited either to the attachments or to its immediate surroundings. While in some cases there is no alteration in the structure of the organ, in the length of the vessels or the ureter, in many other instances serious changes may be discovered.

The changes in the surrounding structures may be divided into two kinds—those involving the adipose capsule and those affecting the attachments.

1. *Changes in the condition of the adipose capsule.*—In
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cases of slight mobility of the kidney there is nearly always some atrophy of the adipose capsule, and frequently the kidney moves freely within it. When the adipose capsule becomes atrophied, it permits slight mobility of the kidney, and this wasting is also the natural sequence to these movements of the organ. The capsule becomes distended, and may ultimately form a considerable sac.

The distension of the adipose capsule may lead to the

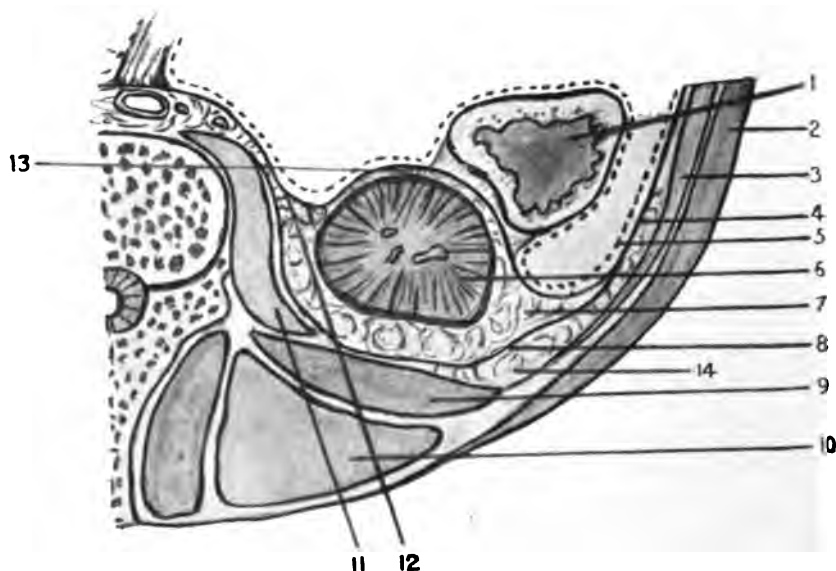


FIG. V.

- 1, Descending colon; 2, internal oblique; 3, transversalis; 4, subperitoneal fascia; 5, peritoneum; 6, right kidney; 7, fat within perirenal fascia; 8, posterior lamellæ of perirenal fascia; 9, quadratus lumborum; 10, erector spinae; 11, psoas; 12, anterior lamellæ of perirenal fascia; 13, fat between perirenal fascia and kidney; 14, fat behind perirenal fascia.

peritoneum covering it being loosened from its position against the posterior abdominal wall. In another variety, the adipose capsule remains adherent to the kidney, and the movement is permitted from the peritoneum having become loosened, so as to form a pouch in which the kidney and its envelopes move more or less freely. We may therefore have three conditions—firstly, where the kidney moves in its adipose capsule, the capsule itself retaining its position; secondly, where the first-mentioned condition exists, and the capsule also has become

movable; thirdly, those cases in which the capsule and kidney are adherent, but where the peritoneum and the attachments of the capsule to the posterior abdominal wall have become relaxed.

In health, one always finds the organ closely packed in adipose tissue (Figs. V and VI, pp. 346, 347), so that the retro-renal fascia (8) can be exposed only by cutting through

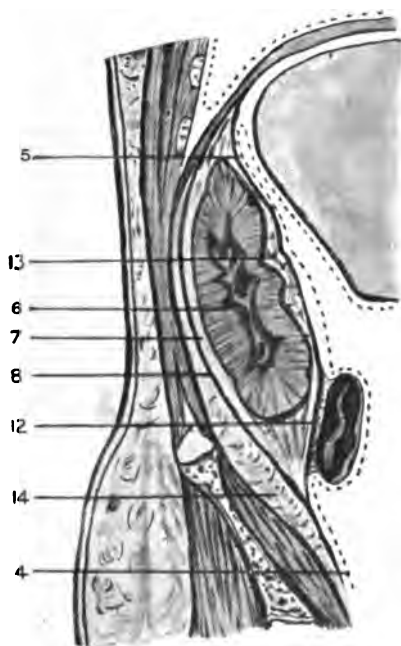


FIG. VI.

4, Subperitoneal fascia; 5, peritoneum; 6, right kidney; 7, fat within perirenal fascia; 8, posterior lamellæ of perirenal fascia; 12, anterior lamellæ; 13, fat between anterior lamellæ and kidney; 14, fat behind perirenal fascia.

a deep layer of fat (14) lying posterior to it (Figs. V and VI, pp. 346, 347), and, after dividing the fascia, the firm fat (7) must be torn away before the kidney is reached. In movable kidney, while a considerable amount of fat remains, it is loosely bound together, so that with the finger alone its meshes may be separated and the surface of the organ exposed. In many cases which have come under my notice, the absorption of fat has been very marked, and the sac

in which the kidney moved had become so loose that it could be easily dragged out into the wound. Frequently, in those of old-standing, the fat becomes infiltrated with loose connective tissue, which makes it tough and fibrous, so that when this altered capsule is stitched to the parietes, the kidney can be maintained in its position without suturing the organ itself.

II. *The changes in the ligamentum suspensorium renis* (Figs. V and VI (8 and 12), pp. 346, 347) vary in different forms of movable kidney. The perirenal fascia, which in health is a thin prolongation of the subperitoneal fascia (Figs. V and VI (4), pp. 346, 347), is the most important structure employed in retaining the organ in its normal position; divided into two lamellæ (Figs. V and VI, pp. 346, 347)—the anterior (12) and the posterior (8)—the fascia in normal conditions is embedded in fat, the layer in front of the kidney (13) being thin, while that lying posteriorly (14) is usually thick. In cases of movable kidney, the lamellæ of the perirenal fascia may become greatly thickened and fibrous, and the sac formed by them considerably enlarged. After separating the layer of fat situated behind it (Figs. V and VI (14), pp. 346, 347), the fascia when exposed may be seen as a large loose fibrous sac, within which the kidney freely moves, only a small quantity of adipose tissue being interposed between it and the surface of the kidney (Figs. V and VI (7), pp. 346, 347). In such cases, the kidney may be fixed by simply diminishing the size of this sac.

III. *The peritoneum.*—As a consequence of distension, the adipose capsule loses its natural fixity, and becomes loosened from its position against the posterior abdominal wall. This is usually preceded by a yielding of the lamellæ of the perirenal fascia, but, as I have already pointed out, not necessarily so; the loosening of the peritoneum depends upon the degree of movement of the whole kidney and its immediate envelopments.

1. The kidney may only move up and down a little more than normal during respiration, so as to be easily felt with the hand.

2. The movement may be so great that the whole kidney can be felt below the costal margins during deep inspiration, but is again restored to its position during expiration.

3. The displacement may be so great that the kidney

remains below the costal margin during expiration, and with the hand can be readily pressed into the pelvis, or across the middle line, or may be rotated either on a vertical or a horizontal axis.

I have seen several cases of movable kidney in which there was no mesonephron, where the organ could, by an effort of the patient, be made to drop down into the pelvis, and when there I might fail to discover its presence by abdominal palpation, although I could make out its situation easily by vaginal examination; then, when raised out of the pelvis, the kidney could be pressed beyond the middle line or upwards beneath the diaphragm. Usually in such cases, when the kidney becomes rotated on its transverse axis, it is the upper pole that presents forwards or downwards, according to the extent of the rotation, and with vertical rotation it is, of course, the convex border that advances to the front.

IV. *Alteration in the structure or relationships of the (a) ureters, (b) vessels, and (c) nerves.*—(a) The ureter may be affected in various ways by the displacements and rotation I have just described. When the rotation is on the transverse or short axis, the upper pole of the kidney (Fig. VII (p. 350), 5) may describe half a circle and present downwards, and the structures forming the pedicle—that is to say, the blood-vessels (6) and the ureter (2 and 4)—may be twisted together, so that, in some instances, the escape of urine is impeded, while in others the circulation of blood is interfered with. In the former, transitory hydronephrosis is induced. This is not a very common complication; I have seen only fourteen cases where the hydronephrosis was sufficiently large to be detected by the hand, but in many others, to judge from the symptoms alone, I have felt sure that occasional obstruction of the ureter occurred, while the kidney was displaced. A clear distinction must be drawn between those cases where, as a rule, the pelvis is not distended, and those where a more persistent swelling becomes temporarily relieved by a sudden urinary discharge. With this limitation, it may be said that transitory or relapsing hydronephrosis is seldom observed. This may be due to the circumstance that in those cases the sac of the hydronephrosis is not often of sufficient size to be detected by the hand, and the symptoms, though acute, are of short duration, being soon relieved by evacuation. Sudden accumulation and rapid subsidence of the swelling is an important characteristic of transitory hydronephrosis, and while, on the affected side, the pelvis is still filling and becoming more and more tense, on the

healthy side there may be complete inhibition of the function of the kidney.

In movable kidney, obstruction to the escape of urine through the ureter may happen in three ways—(1) the displacement of the kidney may consist of a rotation of the organ on its short axis, so that the ureter is twisted round the vessels; (2) there may be a sudden bending of the ureter at any part of its course; or (3) angular insertion of the ureter into the bladder may obstruct the passage of urine.

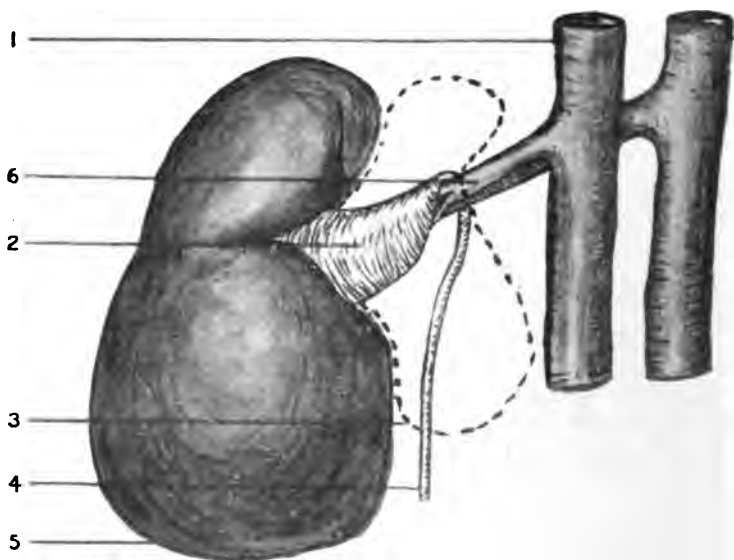


FIG. VII.

1, Vena cava; 2, pelvis of the kidney folded over the renal vessels; 3, position of pelvis when dilated; 4, ureter; 5, upper pole of kidney; 6, renal vein with artery behind it.

Gigon (1856) attributed the hydronephrosis in movable kidney to the circumstance that, while in certain cases the kidney is free, its ureter is firmly bound down, so that the duct is prevented from following the gland when it is depressed, and thus a kink is formed which temporarily renders the passage of urine impossible. With this opinion, most modern pathologists agree, whereas Simon and a few Continental writers, on the other hand, hold the opinion that the collection of fluid within the renal pelvis is caused by alteration in the relationship of the kidney and its duct. They assume

that a temporary impediment having caused a hydronephrosis, the kidney becomes displaced, and, at the same time, the lower half of the distended renal pelvis compresses the first part of the ureter; or, if the pelvis be dilated more on one side of the point of origin of the duct than the other, the ureter is contorted, and the valvular obstruction created, which becomes permanent. As the accumulation increases, the kidney is pushed outwards and backwards, while the upper portion of

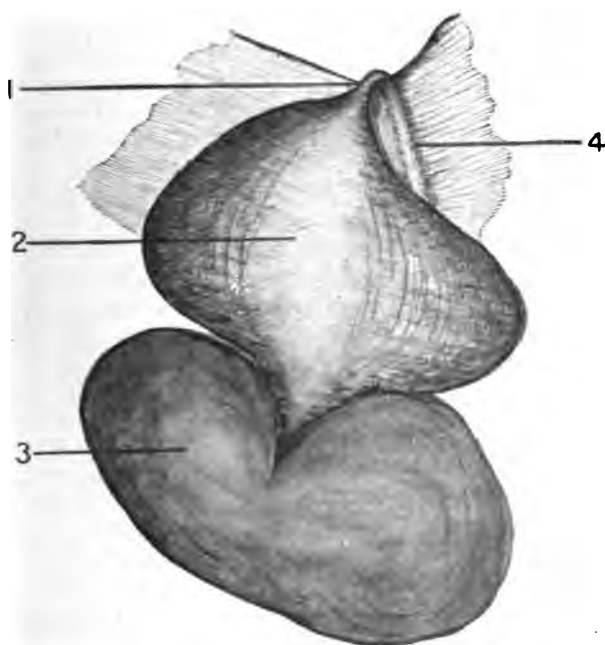


FIG. VIII.

- 1, Ureter folded over peritoneum; 2, dilated pelvis; 3, right kidney displaced downwards with its concavity looking upwards; 4, ureter with its anterior aspect covered by peritoneum.

the ureter comes to be situated anteriorly. Terrier, Baudoin, and Landau hold that frequently repeated displacements, twistings, and kinkings of the ureter in movable kidney are calculated to produce urinary obstruction and hydronephrosis, and maintain that this view is confirmed by the fact that the majority of hydronephroses of obscure origin are seen in women of considerable age, and on the right side.

But while, on the one hand, movable kidney doubtlessly leads

to hydronephrosis, accumulations of fluid within the kidney may give rise to mobility of the organ. I have frequently seen, for example, cases of old-standing cystic degeneration of the kidney become movable, and the same course of events are not uncommon in cases of pyonephrosis and tuberculous disease, where the inflammation has not extended to produce adhesions in the perirenal tissues. This is most frequently seen when the subject of renal disease is also afflicted with chronic bronchitis or other pulmonary affections in which cough is troublesome.

In ten of the fourteen cases referred to above, the attacks of transitory hydronephrosis lasted for not less than six hours, some of the attacks extending over forty-eight hours; all were associated with severe renal colic, and I think I may say, as a rule, that when the obstruction was due to rotation of the kidney on its short axis, the hydronephrosis was less prolonged than when caused by sudden bendings of the ureter in some part of its course.

1. *Kinking from rotation on its short axis.*—The following case illustrates very well, and is, indeed, the most marked and typical instance I have seen of transitory hydronephrosis from rotation of the kidney and twisting of the ureter:—

CASE I.—Movable right kidney—Repeated and severe attacks of transitory hydronephrosis and albuminuria from rotating of kidney and kinking of the ureter—Cured by operation.

Mrs. B., æt. 56, consulted me on 1st March, 1899, complaining of constant dull pain in the right lumbar region, extending, especially after exercise, across the abdomen and the thighs. This discomfort disappeared after rest in bed. When she limited herself to gentle exercise, it seldom interfered with her ordinary vocations, but she was prevented from travelling, or even from standing for any length of time, by a dread of bringing on what she called one of her "severe attacks of pain." The first time she observed any discomfort in the right renal region was in 1891, and this she attributed to a fall against the edge of the back of a dining-room chair, from house-steps, on which she was standing dusting pictures. The chair-back caught her immediately below the right costal margin, and caused so much pain that she became sick and had to go to bed. She was then 48 years of age, stout, and well nourished; had three sons and four daughters, all alive; and she enjoyed excellent health. After the injury, she remained in bed for a week, was treated by her medical

attendant in Dundee, and made an excellent recovery, as far as could be judged at the time. A month after the injury she travelled to London, and on arriving there, she had to go to bed at once in the hotel on account of a "sickening pain in the abdomen." With a night's rest she felt better, but not well, and after a day's shopping the pain recurred. From that time onward any prolonged exertion has been followed by some renal suffering, and now, unless when in bed, the pain is almost constantly present. For this alone the patient would not have sought surgical advice, but, in addition, during the last eighteen months she has been the subject of severe attacks of renal colic. This at first occurred only occasionally, say once in three to five weeks, but during the last six months a week has seldom passed without paroxysmal attacks of severe colicky pain.

Examination of the abdomen.—With the walls being very flaccid, palpation was usually easy by reason of the absorption of adipose tissue, the patient having lost 34 lb. in weight within the last year. The right kidney was found to be movable, and could be easily pressed down into the pelvis and to the middle line in front. I sent the patient into the Sandyford Home to be under observation, and while there she had an acute attack of renal colic. The attack began at 5 o'clock in the morning (20th March, 1899), and steadily increased in severity until midnight, and then suddenly, after the evacuation of a large quantity of urine, the pain was relieved. During the attack the kidney could be distinctly felt, and immediately above it a soft swelling, which on pressure elicited considerable pain. The other symptoms and physical signs of transitory hydronephrosis were present, but as this will be referred to hereafter, it will be unnecessary to detail them here.

23rd March.—The kidney was exposed, when it was found to present the form represented in Fig. VII (p. 350). The upper part of the kidney was large and dilated, while the lower was small and atrophied, and this was so marked that it was made out by abdominal palpation prior to the operation. It was noticed that during the attack of renal colic the kidney had become rotated, so that the larger and upper end (5) was lowermost; therefore, before fixing the kidney, traction was made upon the very loose adipose capsule and the perirenal fascia. This caused the organ to regain its normal position, the upper pole rotating forwards and upwards.

The kidney being loose in a large perirenal sac, the preponderating size and weight of the upper end (5), which was

probably a congenital condition, caused the upper pole to fall forwards and downwards, and, in doing so, the ureter was thrown over the renal vessels, and by being kinked an obstruction was produced, followed by dilatation of the pelvis, as shown by the dotted lines in Fig. VII (p. 350), 3.

2. *Obstruction from sudden bending of the ureter in some part of its course.*—This form of obstruction is believed to be the most common cause of transitory hydronephrosis in movable kidney. Curvature of the ureter can be shown to occur in the dead body when the kidney is displaced downwards. In dogs, Navarro and Tuffier have demonstrated that displacement of the kidney caused retention of urine in the pelvis, and Albarran affirms that, in catheterising the ureter in cases of movable displacement of the kidney, he has met with displacements which were removed by replacing the kidneys in their proper position.

While the peritoneum may become loosened from its attachments in the renal region and become pouched forwards by the wandered kidney, the ureter may remain fixed by firm adhesions, so that when the kidney falls forwards and downwards, the ureter becomes curved, and the angle becomes more acute as the organ descends lower and lower.

CASE II.—*Movable right kidney with hydronephrosis from bending of the ureter—Cured by operation.*

Mrs. C., æt. 30, married, with three of a family, was admitted into the Central Home on 3rd November, 1901, complaining of pain in the right kidney of six years' duration. She was at one time moderately stout and plethoric, but during the three years prior to admission she had been losing weight and colour. Her daily duties consisted of housework and attending at the counter of a baker's shop, where she had to stand for many hours daily. No cause could be assigned for the pain, which seemed to have come on so gradually that the patient could not fix the date of the onset. At the beginning of 1895 she was in perfect health, but by mid-summer she always suffered from dull aching pain in the lumbar region after long standing. Not until 1899 did anything like severe spasms of pain set in, but in May of that year (on 5th and 27th) distinct paroxysms of renal colic, lasting from four to nine hours respectively, occurred. From May, 1899, till November, 1901, she had severe attacks almost every month. These were relieved by rest in bed only, and were succeeded by sickness, nausea, and sometimes vomiting.

The patient was kept under observation at the Home for a fortnight, and instructed to take active exercise, so that the condition might be observed during an acute attack. The paretics were thin and relaxed, the right kidney was easily felt and found to be freely movable, slightly enlarged, and free handling produced pain, accompanied by sickness. During an attack which lasted ten and a half hours, the kidney was found to be lying at the entrance of the pelvis. Its convex aspect could be traced easily, but the notch could not be felt, and above the kidney a vague mass, which contained fluid, could be traced with the hand. An attempt was made to replace the kidney, but this caused so much pain that an anæsthetic required to be administered; then the replacement was easily effected. On coming out of the anæsthetic, the patient passed a large quantity of urine, and the pain subsided. Nephrorrhaphy was performed, and since then there has been no recurrence of the symptoms. Fig. VIII (p. 351) shows the probable condition of matters, as far as it could be ascertained by physical examination under chloroform, and by what was seen at the operation.

3. *Obstruction by angular insertion of the ureter into the bladder.*—This must be a very rare cause of hydronephrosis in movable kidney, and can only be proved by a *post-mortem* examination or by a very extensive exploratory operation; and even when the nature of the obstruction has been proved, the question is still to be answered—Is the movable kidney the cause of the angular insertion, or has the obstruction, by producing a hydronephrosis, induced movability of the kidney? The latter opinion is probably the reasonable one.

I have seen only two cases where I suspected this form of obstruction—the one in a boy sent to me by Dr. Archibald Brown, of Mount Florida, and the following case, which I published in the *Transactions of the Clinical Society of London*, vol. xxix, p. 57:—

“CASE III.—*Right movable kidney with transitory hydronephrosis from kinking of the ureter, cured by the operation of nephrorrhaphy.*

“C. G., æt. 34, single, was admitted into the Glasgow Royal Infirmary on 1st November, 1895, complaining of a dull aching pain in the right loin, which commenced five years ago, and from then till now has steadily increased both in frequency and in severity. This pain was described as being almost constantly present, but over and above it she suffers

frequently from paroxysmal attacks of severe colicky pain, which sometimes assumes a very acute character.

"During the acute attacks the patient was herself able to feel a distinct swelling in the lumbar region, which on pressure was very tender. These acute paroxysms of pain occurred only at intervals of several months at the onset of the disease, but as time passed they have become more frequent. At the present time they recur nearly every second day. The onset of the pain was gradual, but the relief was sudden. Her own description of the attack was as follows:—

"Suppose the pain begins to increase about 1 o'clock in the day, it steadily becomes more severe until about night (6 or 7 o'clock); at the same time the swelling in the loin gradually enlarges, and sometimes extends beyond the middle line in front; as the swelling increases so also does the pain.' During the period of enlargement the urine was scanty and highly coloured, and of high specific gravity. Suddenly a copious flow of pale-coloured urine took place, the swelling subsided, and the pain was suddenly relieved.

"While the hydronephrosis was increasing, the patient was generally compelled to go to bed; but very soon she was unable to lie in the recumbent posture, and required to sit up with the thighs flexed on the abdomen, and the chest thrown well forward in order to relieve pressure.

"On examination of the abdomen between the attacks, the walls were observed to be very flaccid. When the patient lay upon her back a distinct bulging was observed in the lumbar region on the right side, which on palpation was found to be quite soft, but on firm pressure, pain was elicited over a considerable area, extending from the crest of the ilium to the ribs, and as far forward as the middle line. The amount of swelling varied greatly from time to time. When she was suffering from an attack of pain the swelling always increased, and the pain was relieved by a copious flow of pale urine.

"During the paroxysm of pain the swelling could be felt about 2 inches to the left of the middle line, between the umbilicus and pelvis, and extending downwards in the right iliac fossa to within an inch and a half from Poupart's ligament. During the intervals between the attacks of the pain, the right kidney could be found to be distinctly movable, with the excursion ranging from the position of the gall-bladder above to within 4 inches of the symphysis pubis below; at the level of the umbilicus the kidney could be pushed an inch and a half across the middle line. Beyond the condition of the kidney, the patient was absolutely healthy.

"At midnight on 13th November, pain was very severe, and continued so till 11 P.M. the following day, when 40 oz. of urine of low specific gravity were passed.

"Nephrorrhaphy was performed on 26th November, and since that date there has been no recurrence of the pain, nor has any accumulation of urine been observed in the pelvis of the kidney. The main point in the operation was to fix the kidney as high up as possible, and firmly, so as to stretch out the tortuous and elongated ureter."

In this case the operation was completely successful, and the patient is reported (October, 1903) still quite well, and free from any recurrence.

(To be continued.)

ULCERATION OF THE DUODENUM, WITH GENERAL PERITONITIS AND SEVERE HÆMORRHAGE : RECOVERY.

By DAVID DALE LOGAN, M.B., CH.B.

I HAVE thought it worth while to bring forward the notes of this case, which appear to me to be of considerable interest.

I was called to see H. C., a labourer, aged 34, about 9 P.M. on 9th December, when I found him in great agony, with pale, pinched face, anxious expression, rapid, hard, small pulse, and continuous vomiting. The vomited matter at this stage consisted of the contents of the stomach. The condition of the abdomen was peculiar; there was no great distension; the muscles were rigid and hard; there was slight tympanites, and, although painful on pressure, it was not excessively so, but deep pressure caused acute pain. From the beginning of the illness, the pain was distributed almost uniformly over the abdomen; if anything, it was more acute round the umbilicus and above and to the right of it. Later on in the illness, there was slight effusion of fluid, as indicated by a dulness near the flanks. This dulness was not much altered by change of position, and it also disappeared early. I gave an injection of morphia, prescribed tincture of opium in large doses, and ordered hot turpentine stupes to be applied to the abdomen.

On inquiry, I found that his illness had commenced suddenly that morning, being ushered in with shivering, severe headache,

and sudden pain in the umbilical and epigastric regions. He had a good motion on 8th December, twelve hours before his illness began. For a considerable time before, he had complained of "indigestion," and had trouble with his bowels, which were constipated. He had not called in a doctor. For a long while he had been in the habit of drinking large quantities of spirit, principally whisky, which he always took "neat." His meals had been very irregular. There was no history of syphilis.

On 10th December, the pain was less severe, but his condition was graver, his pulse being very rapid and small, while the vomiting persisted. The vomit consisted at first of the contents of the stomach, then of bilious matter, while later in the afternoon, after a severe exacerbation of pain, he vomited the contents of the bowel. He got considerable relief after this, the pain becoming much less severe, and the vomiting also becoming less frequent.

On 11th December, patient passed a very good day, the pain being very much less, while he only vomited three or four times. He passed a dark, constipated motion.

On 12th December, I was sent for in haste, as the pain had returned, and with it the vomiting. When I saw him he was collapsed, the vomiting had ceased, respiration was irregular, sighing was frequent, the face was white and drawn, while the pulse was rapid, small, and fluttering. He had just vomited a very large quantity of blood, the first portion vomited being very much darker than the last portion, which consisted of blood which had not been acted on by the gastric juice. He had also passed two or three large motions of blood; the motions (like tar) filled two large *pôts de chambre*. I gave him a hypodermic injection of strychnine and ergotin, ordered an ice packing to be applied to the abdomen, gave him iced drinks, and flushed out the large bowel with ice-cold water. He had previously been getting ice to allay the excessive thirst. Later on in the evening, I gave him a subcutaneous injection of saline, which was repeated a few hours later on. I stayed with him for a considerable time, and when I left him he was more comfortable, no more bleeding had occurred, his pulse was better, and respiration was easier. I prescribed ergotin and strychnine, and for the next few days he progressed considerably, there being no return of the hæmorrhage.

On the 15th, I gave him a copious rectal injection of soap and water, and then kept the bowels open every day with salines. A fortnight afterwards, he was making very good progress, his only complaint being of pain two or three hours

after taking food. This gradually disappeared, and he is now in good health. He also complained at that time of pain and uneasiness after he had taken his saline, but this pain always disappeared half an hour after the bowels moved.

The temperature during his whole illness was never more than 100°, and sometimes it was subnormal, as when the hæmorrhage occurred. The urine was scanty and very high coloured, and, for three or four hours after the illness began, there was tenesmus and frequent micturition. This disappeared as the day wore on. There was no albumen in the urine. The tongue was moist, and thickly coated at first with a brownish-white fur; but later on it became very dry, dark brown, or blackish in colour, and hacked.

My diagnosis of the case was ulceration of the duodenum, which had just stopped short of perforation. From this lesion sufficient septic material had been absorbed to cause the attack of general peritonitis, while the severe hæmorrhage was caused by the extension of the ulcerative process through the wall of a blood-vessel.

Obituary.

DANIEL MOUNCEY ATKINSON, L.R.C.P.E., L.R.C.S.E.,
L.F.P.S.G., L.M.

MUCH regret will be felt in Glasgow at the loss of Dr. Atkinson, who died of pneumonia on 4th April, after an illness of about four days' duration. He was a native of Yorkshire, having been born at Ferry Bridge, where his father was long engaged in medical practice. Dr. Atkinson studied at St. Mungo's College, and had a distinguished career as a student. He was at one time president of St. Mungo's College Medical Society. He qualified in 1895, served as house physician in the Royal Infirmary, and in later years, besides being engaged in private practice, acted as assistant to Professor D. C. M'Vail in the chair of clinical medicine at the Infirmary. Dr. Atkinson had a considerable collection of curiosities, which had descended to him from an aunt in Chester, who made the collection. The doctor's striking figure and genial manner will be much missed, especially in the Royal Infirmary and its neighbourhood.

CURRENT TOPICS.

UNIVERSITY OF GLASGOW.—List of Degrees in Medicine conferred on 18th April, 1904:—

DOCTORS OF MEDICINE (M.D.)

I.—WITH COMMENDATION.

Adam Brown Kelly, M.B., C.M., D.Sc., Scotland. *Thesis*—"Contributions to the Pathology and Diagnosis of Certain Affections of the Antrum of Highmore."

Daniel Macpherson Taylor, M.A., M.B., C.M., Scotland. *Thesis*—"Symptomatic Ophthalmitis after Preventive Enucleation."

II.—ORDINARY DEGREE.

Thomas Douglas Brown, M.B., C.M., Scotland. *Thesis*—"A Clinical Study of Mediastinal Tumours."

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY
(M.B., CH.B.)

Agnes Wallace Cameron,	Scotland.	Peter Millar,	Scotland.
John Ritchie Gilmour,	"	Griffith John Williams,	Wales.
Alexander Jamieson,	"	Eldred Wright,	Scotland.

At the conclusion of the capping ceremony, Principal Story addressed the graduates. He was glad to be able to say that, owing to benefactions received during the past year, the extension and equipment fund now amounted to over £76,000. This was so far satisfactory, but was not sufficient to enable them to erect more sightly premises for the Chemistry Department than the present "temporary outhouses." He asked why the Government should not have helped them in this matter. He also referred to the duty of the University "to speak with authority on the permanent principles which ought to govern the relations of civilised communities, and secure the welfare of their social, their commercial, their national life." This influence of the University on the people at large was, to some extent, given effect to by the sets of lectures outside the curriculum of any of the faculties, which had been delivered during the past session. As regards the education afforded to the student, he held that the University should hold the balance evenly between the humanities and the sciences. At the same time they should not neglect the claims of physical culture, and in this

connection, he was glad to see that the University Rifle Volunteer Corps had been revived. He concluded his address with some remarks on the new Education Bill, and regretted that it aimed at controlling the schools from an official centre, with rigid theories of its own, rather than the liberal idea of encouraging their life in the healthy freedom of self-government. He reminded the graduates that the credit and good name of their *Alma Mater* were in their hands. Thereafter the proceedings closed with the benediction.

In the evening a *conversazione* was held in the Bute Hall. To this were invited members of Council registered in 1888-1891, and graduates of sessions 1902-3, 1903-4. The function was largely attended, and the occasion was happily chosen as a means of bringing together in a common fellowship many old and new friends. Many and hearty were the recognitions and handshakes, and we know that we but voice the feeling of the gathering when we express our sense of indebtedness to Principal and Mrs. Story for what was so happily conceived and so successfully carried out.

COMMEMORATION DAY AT THE UNIVERSITY.—On Tuesday, 19th April, was celebrated for the first time Commemoration Day. While the fundamental idea of this new institution is the remembrance of the founders and benefactors, it is hoped, also, that it will serve as a powerful aid in the cultivation of social life within the University. With these two ideas in view, we think the scheme of the functions was well planned, and reflects great credit on the joint-committee of the Court, Senate, and General Council, to whom it was entrusted.

The proceedings, which took place in the Bute Hall, opened with a short religious service conducted by the Principal and Rev. Professors Taylor (Edinburgh) and Herkless (St. Andrews). The oration, on "Joseph Black, M.D.," was delivered by Sir William Ramsay, K.C.B. The orator outlined Black's career, and then gave a short account of his experiments in connection with "latent heat." The details into which Sir William entered were perhaps rather dry for a general audience, but the speaker's fluency more than outweighed this shortcoming, and his brevity—the oration lasted barely three-quarters of an hour—was commendable. Honorary degrees in Divinity and Law were thereafter conferred, the graduates being introduced by Rev. Professor Stewart and Professor Glaister respectively. Among the former, the Rev. Ambrose Shepherd had a most enthusiastic reception, while of the Doctors of

Laws, the first on the list, the Ambassador of the United States of America (the Hon. J. H. Choate), and the last, the Director-General of the Army Medical Service (Sir William Taylor, K.C.B.), shared the honours pretty equally. The former was received with the well-known strains of "John Brown's Body"; and the latter, having been hailed chorally as a "Soldier of the King," got a special round of cheering when Professor Glaister alluded to his having been educated in the old College in High Street.

In the afternoon, a bronze medallion bust of the late Professor John Young, M.D., was unveiled in the Hunterian Museum. The medallion, along with a volume of his essays and addresses, and the catalogue of the Hunterian manuscripts, form a fitting memorial of one who was for thirty-five years a striking personality in the University.

The concluding function of the day was the banquet in the Bute Hall. Over two hundred sat down, and the sombre appearance of the hall was relieved by the multi-coloured academic robes of the diners, and, later, by the presence of ladies in the balconies. A long toast list was gone through, the speech of the evening being Mr. Choate's reply to the toast of the "New Honorary Graduates."

Altogether the proceedings were a success, and the first Commemoration Day is not likely to be forgotten by any who were able to be present. Such an annual gathering is certain to foster the spirit of brotherhood and of loyalty, and as such must be hailed as a power for good.

UNIVERSITY OF GLASGOW.—The following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B, Botany; Z, Zoology; P, Physics; C, Chemistry):—

Archibald Aitchison (z)
John Andrew Aitken (P)
William Allan (c)
David Anderson (z)
William Anderson (B, P)
Thomas Archibald (z, c)
James Currie Auchencloss (B, z, P)
William Barr (z)
Frank Beaton (B)
Charles Bennett (z, c)
Robert Inglis Binning (B, P)
John Blakely (z)
John Lindsay Boyd (z, c)
William Brown, M.A. (B)

William Barrie Brownlie (z, c)
David Young Buchanan (z)
Murdo Buchanan (z)
Hector Mackay Calder (P)
John Cameron (z, P)
James Carrick (z, c)
Donald James Clark (z)
John Humphrey James Victor Coats
(B)
James Cook, Partick (z, c)
John Cruickshank (z, c)
Walter Dawson (P, c)
James Cowie Dick (B)
William Hunter Duncan (B)

James Kirkwood Dunlop (P, C)
 Allan Dunsmuir (C)
 Thomas Loudon Fleming (B)
 Thomas Forsyth (B)
 William Leonard Forsyth (Z, C)
 John Fotheringham (Z)
 Berkeley Gale (C)
 David Gibson (Z, C)
 Walter Gilmour (Z, C)
 Hugh MacVicar Gossman (B, P)
 Alexander Thomas Arthur Gourlay
 (B, P, C)
 Edward O'Driscoll Graham (P)
 Thomas Edmondstone Gray (Z, C)
 William Cooper Gunn (P)
 Josiah Stranaghan Harbinson (B, Z,
 P, C)
 Stephen John Henry (Z, C)
 James Hall Hislop (Z, P)
 William Alexander Hislop (P, C)
 Archibald Hogg (P, C)
 Benjamin Hutchison (Z, C)
 Alexander Mills Kennedy (Z, C)
 Thomas Joseph Kirk (Z)
 John Lang (Z)
 William Leitch (B, Z, P, C)
 Daniel Conway M'Ardle (B, C)
 Peter Cunningham M'Arthur, M.A.
 (B)
 Frank Crombie Macaulay (Z)
 Hugh M'Callum (Z, P)
 Robert M'Carlie (P)
 Alexander Macphail Macdonald (Z)
 Alexander Campbell MacDougall (B,
 P)
 Joseph Bogue Mackay (B, P, C)
 William M'Kendrick (P, C)
 Francis William Mackichan (B, P)
 William Campbell Mackie (Z, C)
 William Edward M'Lelland (C)
 James Walter M'Leod (Z, C)
 James M'Millan M'Millan (Z, P, C)
 John MacMillan (B, P)
 Peter Russell M'Naught (Z, C)
 Donald Irvine M'Naughtan (B, P,
 C)
 Allan M'Pherson (Z, P)

William Aubrey Layard Marriott (Z,
 C)
 Frank Needham Marsh (Z, C)
 Horatio Matthews (C)
 Kenneth Chisholm Middlemiss (Z, C)
 Thomas Miller (Z)
 Robert M'Kenzie Morison, M.A. (B,
 Z, C)
 Hugh Morton (C)
 James Muir (Z, P, C)
 Robert Charles Muir (P)
 William Aikman Muir (Z, P)
 Archibald Campbell Munro (Z, C)
 Arthur Alexander Murison (P)
 Charles Sutherland M'Kay Murison
 (B, C)
 Archibald Naismith (P, C)
 Watson Noble (Z, C)
 Albert Rutherford Paterson (Z, C)
 Adam Patrick (B, Z)
 Ralph Montgomery Fullarton Picken
 (Z)
 David Purdie (Z, C)
 Murray Purvis (Z, C)
 Edward Quigley (Z, P)
 Richard Rae (Z)
 Nicol M'Nicol Rankin (B, Z)
 Thomas David Coulthard Ross (B, P)
 George Waugh Scott (P, C)
 Allan Semple (B, P)
 William Alexander Sewell (Z, C)
 James Brown Sim (Z, P)
 William Stevenson (P, C)
 Lawrence Storey (C)
 Hugh Cochrane Storrie (Z, P, C)
 David Taylor (Z, C)
 Walter Telfer (P, C)
 John Archibald Thomson (B, P, C)
 John Shedden Thomson (Z, C)
 Robert M'Nair Walker (Z, C)
 William Samuel Waterhouse (P)
 Tom Paul Watson (B)
 Thomas Charles Dalrymple Watt (C)
 Charles Percival Williamson (Z, P)
 David M'Gruther Wilson (Z, C)
 Hugh Mundle Wilson (B, P, C)
 William Alexander Wilson (B, C)

WOMEN.

Martha Maclean Buchan (P, C)
 Margaret Baird Sproul Darroch (B, Z)
 Mabel Foley (P, C)
 Margaret Gardner Forrest (B, P, C)
 Jeanie Walker Jones (P, C)
 Annie M'Crorie (B)

Janet Annie Macves (Z)
 Flora Morrison (P)
 Jeannie Peden Rose (B, Z)
 Winifred Margaret Ross (P)
 Jessie Capie Russell (P, C)
 Jeanie Hinshaw Stewart (P, C)

The following have passed the second professional examination for the degrees of Bachelor of Medicine (M.B.) and

Bachelor of Surgery (Ch.B.) in the subjects indicated (A, Anatomy; P, Physiology; M, Materia Medica and Therapeutics):—

George Victor Anderson (A, M)	John Henry M'Kay (A, P, M)
James Montgomery Anderson (M)	Thomas Cooper Mackenzie (P)
Andrew Hamilton Arnott (P, M)	William Ferguson Mackenzie (A, P, M)
John Bain, M.A. (A)	William Macleod (A)
Thomas Barbour, B.Sc. (A, P)	Norman Smith MacNaughtan (A)
Charles Burns (P)	Alister Argyle Campbell M'Neill (A, P)
William Archibald Campbell (A, P, M)	Charles James Colquhoun Macquarie (A, P, M)
Donald Livingston Carmichael (P, M)	William Hislop Manson, M.A. (M)
Henry Howard Christie (A, P, M)	Robert Marshall (A, P)
Donald Clark (M)	Robert May (A)
John Sawers Clark, M.A. (A, P)	John Miller (A, P, M)
James Coutts (A, P, M)	William Miller (A, P)
Andrew Donaldson Cowan (A, M)	Peter Mitchell, M.A. (A, P)
Thomas Lawson Craig (A, P)	Hugh Walker Moir (A, P, M)
Arthur Muir Crawford (A, P, M)	Patrick Joseph O'Hare (A)
Weir Burns Cunningham (A, P)	John Oswald (P)
Harold Windley Dempster (P, M)	James Hogg Paul (A, P)
Allan Campbell Douglas (M)	Arthur Geoghegan Paxton (P)
Richard John Driscoll (M)	John Reid (M)
James Dunbar (A)	Frederick Gordon Robertson (A, P, M)
Ernest Milne Eaton (A, P)	John Cooper Russell, M.A. (M)
Thomas Henderson Forrest (M)	William James Rutherford (A, P, M)
James Wilfred Georgeson (P)	Alfred Cecil Sharp (A, P)
William Gilbert (A, P, M)	John Sharp (A, P, M)
William Gilchrist (A)	James Charles Donaldson Simpson (P, M)
Arnold Harris Gray (A, P)	Robert Alexander Slater (A)
John Isdale Greig, M.A. (M)	William Sinellie (A, P)
Robert Neil Guthrie (A, P, M)	Thomas Baillie Smith (A, P, M)
John Hammond (A, P)	James Stevenson (A, P)
William Towers Hardie (A)	John Stevenson (A, P)
Robert M'Cowan Hill (A)	Arthur Anderson Stewart (A)
Lawrence Hislop (M)	David Laurence Alexander Tate (A, P, M)
David Guthrie Hunter, M.A. (M)	Charles Samson Thomson (A, P, M)
Harry Stewart Hutchison (M)	Martin Turnbull (P)
Arnold Ernest Jones (A, M)	Alexander MacMillan Watson (A)
Percy James Kelly (A)	James Kennedy Welsh (A, P, M)
John Keys (A, P)	David John Williams (M)
James Dunlop Kidd (A, P)	George Haswell Wilson (A, P, M)
Robert Wright Leckie (A)	Moses Youdelevitz (A, P)
Alexander Leggat (A)	John Young, Mount Vernon (A)
Alexander M'Call (P)	
John M'Cartney (M)	
David MacDonald (A, P, M)	
James M'Farlane (A, P, M)	

WOMEN.

Jeannie Montgomery Andrew (A, P)	Agnes Picken, M.A. (A, P, M)
Rose Isobel Hudson (A, P, M)	Harriett Rowland Louise Reid (A, M)
Katherine Robina Margaret Lucas (A)	Vera Dagmar Reis (P)
	Margaret Baillie Taylor (P, M)

Old Regulations.—Mr. Robert Stewart M'Kim, M.A., has passed the second professional examination (Anatomy and Physiology) for the degrees of M.B. and C.M.

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P, Pathology; M, Medical Jurisprudence and Public Health):—

George Allison Allan (P)
 William Smith Allan (P, M)
 Andrew Allison (P, M)
 Andrew Woodroffe Anderson (M)
 James Henderson Baird, B.A. (P, M)
 Hugh Barr (P, M)
 George Duncan Morrison Beaton (P, M)
 John Miller Hopkins Caldwell (M)
 Thomas Murdoch Campbell, M.A. (P, M)
 Charles Game Angus Chislett (M)
 Robert Wilson Dale, M.A. (P, M)
 Robert Scott Dewar, M.A. (P, M)
 Walter Duffy, M.A. (P, M)
 John Shaw Dunn, M.A. (P)
 Eric John Dyke (P, M)
 Hamilton William Dyke (P, M)
 James Fairley (P, M)
 Harry Prescot Fairlie (P, M)
 Alexander Burns Ferguson (P, M)
 George Garry (M)
 James Gemmell (P)
 Joseph Glaister (P, M)
 Alexander Graham, B.Sc. (P, M)
 William Grier (P)
 Charles Francis Dyer Hammond (M)
 James Duncan Hart (P)
 Frank Hauxwell (P)
 James Waugh Hay (P, M)
 Ralph Vincent Howell (M)
 Alexander Hunter (M)
 James Hunter (P)
 William Boyd Jack (P, M)
 George Notman Kirkwood (P)
 William Love Kirkwood (P, M)
 George Hugh Logan (P, M)
 Peter Lowe, M.A., B.Sc. (P, M)
 John Bertram M'Cabe (P)

Thomas M'Cosh (P)
 Walter George Macdonald, M.A. (P, M)
 Duncan M'Ewan (P)
 Hugh Allan Macewen (P, M)
 James Denniston Macfie (P, M)
 John Macintyre (M)
 Ronald Mackinnon (M)
 Roderick MacLeod (P)
 Matthew Thompson Drummond
 M'Murich (P, M)
 Hugh MacNaught (P)
 Peter Maguire (P, M)
 William Main (P, M)
 John Moffatt (P, M)
 William Struthers Moore (P, M)
 Henry Joseph Milligan (M)
 David Robertson Mitchell (P)
 John Dunn Nisbet (M)
 John Pearson (P)
 Henry Sherwood Ranken (P, M)
 Cunison Deans Rankin (P, M)
 Thomas Hood Rankin (M)
 Thomas Thomson Rankin (P)
 James Mill Renton (P, M)
 Arthur Robertson (P, M)
 William Rolland (P)
 Campbell Ross (P)
 John Macdonald Ross (P)
 Alexander Cappie Russell (P, M)
 Edward Louis Augustin Sieger (M)
 William Hermann Sieger (P)
 James Alexander Somerville (M)
 Thomas Strain (P, M)
 William Alexander Stuart (P, M)
 John Taylor (P, M)
 Thomas Thom (P)
 William Lind Walker, M.A. (P)
 Alexander MacMillan Watson (M)
 George Young (P, M)

WOMEN.

Bethia Shanks Alexander (M)
 Jeannie Thomson Clark (P)
 Mary Theresa Gallagher (P, M)

Elizabeth Maud M'Vail (P)
 Charlotte Reid Park (M)
 Mary Spence (M)

The following candidates passed with distinction in the subjects indicated:—

First Examination.—In *Zoology and Physics*: William Aikman Muir. In *Zoology and Chemistry*: Thomas Edmondstone Gray, Peter Russell M'Naught,

Archibald Campbell Munro. *In Physics and Chemistry*: Alexander Thomas Arthur Gourlay. *In Botany*: Margaret Gardner Forrest, Peter Cunningham M'Arthur, M.A. *In Zoology*: John Lindsay Boyd, Benjamin Hutchison, Robert M'Kenzie Morison, M.A.; Albert Rutherford Paterson, Ralph Montgomery Fullarton Picken. *In Physics*: Walter Dawson, James Kirkwood Dunlop, Mabel Foley, Josiah Stranaghan Harbinson, Archibald Hogg, Alexander Campbell MacDougall, Francis William Mackichan, James M'Millan M'Millan, Edward Quigley, Thomas David Coulthard Ross, Jessie Capie Russell, Allan Semple, James Brown Sim, Hugh Cochrane Storrie, Charles Percival Williamson, Hugh Mundle Wilson. *In Chemistry*: John Cruickshank, Berkeley Gale.

Second Examination.—*In Anatomy, Physiology, and Materia Medica and Therapeutics*: David Laurence Alexander Tate. *In Anatomy and Physiology*: Peter Mitchell, M.A.; Alfred Cecil Sharp. *In Anatomy*: Robert M'Cowan Hill. *In Physiology*: Charles James Colquhoun Macquarie, William James Rutherford.

Third Examination.—*In Pathology*: John Shaw Dunn, M.A.; William Grier, William Rolland, Thomas Thom. *In Medical Jurisprudence and Public Health*: Joseph Glaister, James Waugh Hay, Peter Lowe, M.A., B.Sc.; William Struthers Moore, James Mill Renton, Alexander Cappie Russell, William Alexander Stuart.

In the Second Professional Examination for M.B., C.M. (Old Regulations), Robert Stewart M'Kim, M.A., passed with distinction in Physiology.

NEW PREPARATIONS, &c.

MANGANESE AND IRON CITRATE WITH QUININE (SOLUBLE), WELLCOME BRAND (London: Burroughs Wellcome & Co.).—This is a scale preparation which contains about 7 per cent of manganese, 14 per cent of iron, and 15 per cent of quinine. The dose is from 3 to 10 grains.

MANGANESE AND IRON CITRATE WITH STRYCHNINE (SOLUBLE), WELLCOME BRAND.—This scale preparation contains the same proportions of manganese and iron as the other; but instead of the quinine, it contains 1 per cent of strychnine. The dose is 1 to 3 grains.

These salts are also obtainable in tabloid form.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1903-1904.

MEETING V.—11TH DECEMBER, 1903.

The President, DR. DAVID NEWMAN, in the Chair.

I.—PATIENT UPON WHOM HYSTERECTOMY WAS PERFORMED
FOR RUPTURE OF THE UTERUS.

BY DR. J. M. MUNRO KERR.

This is the first successful case of the kind in the Glasgow Maternity Hospital. She was sent to me from a country place, some 7 miles from the city. Briefly told, the history was as follows:—The presentation of the child was transverse, and the midwife had allowed the labour to go on too long without sending for assistance. When the doctor arrived he performed version, extracted the child, and then found a long loop of bowel down in the vagina. He immediately brought the patient into the Maternity Hospital. The case was one peculiarly suitable for operation, for the collapse was slight, and she was a strong, healthy individual. On opening the abdomen, which contained a small quantity of blood, one tear was found to extend vertically through the whole posterior wall of the lower uterine segment and cervix right down to the vagina, while the other extended transversely through the lower limits of the lower uterine segment. The uterus was removed, being cut off below the transverse tear. The small remaining part of the vertical tear and the stump were then carefully stitched, and the peritoneum brought over the latter with a continuous catgut suture. The patient's recovery was uninterrupted.

II.—LARGE FIBRO-MYOMA OF THE UTERUS WHICH HAD EXTENDED INTO THE RIGHT BROAD LIGAMENT AND WHICH WAS REMOVED BY ENUCLEATION.

BY DR. J. M. MUNRO KERR.

The patient, aged 26, from whom this tumour was removed was seen in consultation with Dr. W. F. Somerville. We both

agreed, after a careful examination under chloroform, that the tumour was a fibroid of the uterus. Her symptoms were entirely the result of pressure, for she had had no hæmorrhage, and the menstrual periods were quite regular. On examination by the vagina, the cervix, which could only be reached with extreme difficulty, was felt high up behind and to the left of the symphysis, being displaced by a large mass which occupied the pelvis and extended well up above the umbilicus. On making the ordinary incision I came down on cellular tissue. I consequently concluded that the tumour had in its growth displaced the anterior layer of the broad ligament upwards. I therefore opened into the peritoneal cavity above the umbilicus, and then found I had to deal with a large mass in the right broad ligament and burrowing away deep down into the true pelvis in front of the rectum. I shelled out the entire mass without much difficulty, and tied some vessels which, along with some fibrous tissue, formed the remnant of the attachment to the uterus. I had now a huge capsule of tissue, with the uterus and the tubes and ovary of the right side attached. I packed the lower part of this cavity with gauze, and brought out an end of the gauze through the vagina (after the abdomen had been closed). I then removed a large portion of the upper part of the capsule, and closed the remainder above the gauze with layers of catgut sutures. The anterior right side of the uterus I then tacked to the front part of the pelvis. Both tubes and ovaries and the entire uterus were left behind. The operation took some time, but the patient stood it well, and made an uninterrupted recovery. The gauze was removed through the vagina thirty-six hours after the operation. The tumour removed weighed 13 lb.

III.—MULTILOCLAR OVARIAN CYST ENUCLEATED FROM THE
BROAD LIGAMENT IN A PATIENT AGED 76.

BY DR. J. M. MUNRO KERR.

Miss T., aged 76, was admitted to the Western Infirmary while I was on duty on 18th August, complaining of abdominal swelling which was beginning to give her a good deal of discomfort. She stated that she noticed the swelling first about three years before, but until six months ago it had not given her much discomfort. During the last three months, growth of the tumour had been quite noticeable, and with it an increasing dyspnœa and difficulty in going about. On examining the swelling it was found to project above the

umbilicus, and to give to the hand an elastic feel. It was fixed, and on bimanual examination appeared to be connected with the right appendages, for the uterus, slightly drawn up, could be felt to the left and in front of the growth. The operation was considered serious on account of the patient's age. This was explained to her, but she decided to have it done. Abdominal section was accordingly performed on 25th August, and the cyst which I show you was removed from the right broad ligament. This was done as quickly as possible. The sac was then tacked to the lower part of the abdominal wound, gauze was packed into the cavity of the sac, and the abdominal wound closed. The patient's recovery was rather protracted, but ultimately she left the hospital very well. Hypostatic congestion made its appearance at the bases of both lungs about the end of a week, and it looked as if she would certainly die. With good nursing, however, she got over that trouble. A purulent discharge made its appearance later from the cavity of the sac which had been stitched to the lower part of the abdominal wound. Ultimately it also ceased, and the wound became completely healed.

IV.—CASE OF SEVERE CONCUSSION INJURY TO THE EYE.

By DR. LESLIE BUCHANAN.

Dr. Buchanan's paper will appear as an original article in a future issue.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1903-1904.

MEETING IV.—11TH JANUARY, 1904.

The President, MR. A. E. MAYLARD, in the Chair.

I.—FRESH SPECIMENS.

By DR. J. ROWAN.—An infant whom he had under observation, and who suffered from a growth of the iris which he believed to be a gumma. There was a distinct syphilitic history.

By PROFESSOR MUIR.—A hæmorrhage into the pons varolii and crura cerebelli, and granular kidneys from the same case.

II.—CASE OF VARICOSE ANASTOMOSIS BETWEEN THE SAPHENOUS VEINS, THROUGH THE EXTERNAL PUDIC AND SUPERFICIAL EPIGASTRIC VEINS.

By DR. A. N. M'GREGOR.

W. S., æt. 26, brakesman, was admitted to the Glasgow Royal Infirmary on 31st December, 1903. He was suffering no pain, but was afraid the varicose veins on his abdomen might burst. Patient was a healthy man until seven years ago, when he had enteric fever, complicated by severe pains in the left leg. While in South Africa four years ago he again had enteric, and shortly afterwards a slight attack of malaria. It was after this that he noticed the large veins on his abdominal wall, and also that his left leg became swollen when he was at work.

On examination, a triangle of varicose veins is seen on the anterior abdominal wall. The apex is near the umbilicus, the lower angles at the saphenous openings. The base runs above the symphysis pubis, and there is another communication parallel to the base and higher up. The left leg is distinctly larger than the right, but is not œdematous. On lying down, the triangle of veins is emptied, and the left leg gradually becomes smaller. There are no other varicose veins, hæmorrhoids, or varicocele. The blood in the triangle runs from the left saphenous opening upwards and across to the right saphenous opening; and when they are emptied, and then the pressure removed, they fill up so quickly from left to right that it would seem to be a fall back of blood from the abdomen. The left external circumflex iliac is not varicose, but is slightly dilated, and its blood flow is reversed.

Opinion was asked as to the advisability of ligaturing these varicose veins.

Mr. H. E. Clark advised ligature.

Professor Muir thought the intravenous pressure so great as to indicate obstruction in the common femoral or iliac veins, and so would not recommend any interference.

The *President* suggested temporary pressure, experimentally, by means of a truss for inguinal hernia, and if that produced no untoward symptoms, then the veins might be ligatured.

III.—FATAL CASE OF RUPTURE OF HYDRONEPHROTIC KIDNEY.

BY DR. JAMES CARSLAW AND PROFESSOR MUIR.

Clinical History by Dr. Carslaw.—This case, specimens from which Professor Muir will afterwards describe, is, so far as I am aware, unique, and presents several points of interest. The patient died from the rupture of an old-standing hydronephrosis, and the practically complete suppression of urine which was induced by that accident. He was a young man of 29, a clerk, and had been in Dr. Finlayson's ward in the Western Infirmary for about four weeks last summer. His case then presented the features of a chronic cirrhosis of the kidneys. He was pale, though without œdema; he had headaches, occasional sickness, and pain in his back on both sides, and he was passing a large amount of urine. The quantity of urine was usually from 120 to 160 ounces in the day, the maximum 180 ounces, and there was only once less than 90. The specific gravity of the urine was low; there was present a distinct amount of albumen, and on admission there was a trace of blood, which passed off in a day or two. Some arterio-sclerosis and evidences of slight hypertrophy of the left ventricle completed the diagnosis. His symptoms had been troublesome for only about six weeks before he came into the infirmary; but on one occasion, six years before, he had noticed blood in his urine for three or four days. After returning home and having a further rest, he went back to work, and kept fairly well, except that he was apt to have indigestion and occasionally some vomiting after food. There was some slight hæmaturia again in the second week of December, and this brings his history to the time of his present illness.

He returned from his work at midday on Saturday, 12th December, and, after partaking of a hearty meal about 2 o'clock, he felt sick and vomited. He was immediately seized with a most violent pain in his right side, so severe that he fell down on the floor in agony. He had passed urine about 1 P.M., and had noticed nothing abnormal about it, and shortly after the severe pain he passed an ounce or two more. The pain continued, however, and he could not pass any more urine, though the inclination to do so was great. His friends becoming alarmed, he was seen that night about 10 o'clock, when his temperature was 98·4°, his pulse 96, and he was not looking specially ill or collapsed. His pain was on the right side of the abdomen, in a position suggesting the

right ureter; but great tenderness made it difficult to palpate the abdomen satisfactorily. There was some dulness to percussion on the right side. With a history of chronic Bright's disease, it was thought right to withhold morphine, and he was recommended warm drinks and hot fomentations. The next morning I found his temperature still normal; he had had no sleep, and had not been able to pass any urine. But he made no complaint of headache, and looked fairly comfortable. I ordered the warm liquid nourishment to be continued, also a hot pack, and, feeling sure that there was no appendicitis, some saline laxative, to be followed by enema, if necessary. Early in the evening his temperature was 99.6° and the pulse 105. The pain was much as before; the abdomen was rather more distended, and there was still dulness at the right side. He still had passed no urine, and, on passing a catheter into his bladder, I got not a drop of urine. I then brought Sir Hector Cameron to see him, and we arranged for his removal to the Western Infirmary next morning; for, though his condition at that time was quite good, and the sudden change from polyuria to anuria was not yet producing any serious symptoms, the outlook was not hopeful.

At this stage Sir Hector and I were inclined to think that his original illness had not been simple cirrhosis of the kidneys, and that he probably had a calculus in his right ureter, while the other kidney, for some reason or other, was damaged.

Dr. Finlayson saw the patient with Sir Hector and myself next morning, 14th December, at the Western Infirmary. It was arranged to examine him under chloroform, but nothing definite could be made out, and a catheter passed still got no urine. He was given a pilocarpine pack that evening, and perspired freely. On the morning of the 15th he was rather worse; he had had no sleep, temperature was 99.2° , and his pulse 120 and rather irregular. It was decided to do an exploratory operation. Sir Hector Cameron first incised in the right iliac region, found the cæcum distended and injected, the appendix normal, and detected nothing wrong with the ureter. But the whole of the retroperitoneal tissues presented a distended and boggy appearance. The abdominal wound was closed, and a lumbar incision made so as to expose the kidney. A large amount of clear fluid, evidently extravasated urine, escaped from this posterior wound, but the source of the leak was not discovered; a large drainage-tube was inserted, and the wound closed. During the operation the patient was very weak;

but he rallied fairly well from the shock, and for the next two days the dressings were repeatedly soaked with blood-stained urine. On the night of the operation 2 ounces of blood-stained urine were got by catheter from the bladder; but no more urine was found after that evening, though the catheter was passed several times. His condition gradually became more serious, and he died, never having had any temperature to speak of, three days after the operation, and six days after the onset of the illness.

Professor Muir found, at the *post-mortem*, that both the patient's kidneys were hydronephrotic, and that there was a tear in the distended pelvis of the right kidney, through which the urine had escaped.

Here, then, was a patient with double hydronephrosis of a moderate degree, presenting the features of an ordinary cirrhotic kidney, the cirrhosis and other changes having been produced by the backward pressure of the distended pelvis of the kidneys. The cause of the hydronephrosis is not apparent; but once established, the condition would keep itself up. No distinct variation in the quantity of urine from day to day had ever been noticed, nor had any cystic tumour been made out. No doubt the rupture took place as a result of the strain of severe vomiting, and in this case it was retroperitoneal. Rupture of a hydronephrotic kidney is not so very infrequent in cases of calculus, and then it may sometimes be retroperitoneal and sometimes into the peritoneal cavity.¹

As for the surgical aspect of the present case, it is clear that nothing could have been done to remedy the damage or to relieve the condition of suppression of urine, which was a special feature of the case. This anuria was all the more striking when contrasted with the excessive amount of urine the patient had previously been passing. The commonest cause of anuria of this nature is definitely obstructive—an obstruction suddenly blocking the pelvis of the kidney or ureter on one side when the function of the other kidney has previously been interfered with by calculus or disease, cystic or otherwise. However, even a healthy opposite kidney may cease acting under these conditions from what is called reflex inhibition; and in the present case, the left kidney being also a damaged kidney, the anuria may with confidence be explained in that way. The patient passed an ounce or two of urine soon after the rupture of his kidney, probably the urine that happened to be in his bladder

¹ Dickinson, *On Renal and Urinary Affections*, part iii, chap. xiii.

at the time. Thereafter, all the urine got from his bladder by that means was 2 ounces on the evening of the day of operation; that would be all that the left kidney would be responsible for after the accident. Although a good deal of urine drained away from the right side through the wound, that may have been mainly from the extravasation into the tissues.

Although, then, the patient lived for six days after the rupture, had practically complete suppression of urine, and had been the subject of cirrhosis of the kidneys, he developed no uræmia of the ordinary nervous type. The toxic influence was exerted principally on the heart, and, though he had some restlessness and slight twitchings, especially of the facial muscles, he developed no convulsions nor headache, and there was no dropsy. In this the patient's condition followed pretty exactly the description of similar cases by Dickinson¹ and others.

Professor Muir's report.—In the region of the right kidney is a large oval mass, about 8 inches in length, projecting the colon forward. This is made up of kidney surrounded by loose connective tissue, which is very œdematous and infiltrated with blood. The hæmorrhage and œdema are most marked around the suprarenal capsule, where the tissue has a firm gelatinous consistence; here and there in it are small masses of adipose tissue of dull yellowish appearance. The hæmorrhagic infiltration extends upwards to the side of the duodenum. The wound in the right lumbar region has opened into this tissue.

The kidney is enlarged owing to hydronephrosis; the measurements, including the pelvis, are $5\frac{1}{2}$ inches vertically, 4 inches from side to side, and $2\frac{1}{2}$ inches in thickness. The pelvis, which is filled with blood-stained fluid, is very much dilated, especially anteriorly, where it bulges considerably forward. The kidney substance is much atrophied, being in some places reduced to a mere rind, though at others measuring half an inch in thickness; there is also considerable interstitial change. The mucous membrane of the pelvis is thickened and somewhat opaque in appearance, but is quite smooth, there being practically no evidence of pyelitis. A rupture is present in the form of a curved tear with fairly smooth margins. The tear commences at the upper end of the inner part, and extends downwards and slightly inwards on the anterior wall of the pelvis for a distance of 3 inches,

¹ Dickinson, *On Renal and Urinary Affections*, part iii, chap. xxiv.

the concavity of the tear being directed inwards. For the greater part of its extent the tear only passes through the mucous membrane of the pelvis; but at places the outer layer has given way, and thus the fluid has escaped into the tissue around. The ureter starts from the lower part of the pelvis; its aperture is somewhat small, and the wall is a little thickened; but the lumen is quite free, and easily admits the passage of an ordinary-sized probe. The rest of the ureter is normal, and the opening into the bladder is also quite free.

The left kidney is considerably enlarged, measuring $5\frac{1}{2}$ inches in length. Here, also, the pelvis is dilated, though to a less degree than on the other side, the maximum (vertical) length being $4\frac{1}{2}$ inches, but the widening is much less proportionately. The lining is thickened and opaque, but there is no pyelitis. The calyces are much widened and flattened, and the kidney substance is considerably atrophied, the cortex measuring about a quarter of an inch in thickness. There is diffuse interstitial change, with atrophy, and the tissue is very anæmic. The capsule can be stripped fairly easily from both kidneys, and the surface of each is comparatively smooth. The ureter is normal, and is pervious in its whole extent.

On microscopic examination, both kidneys showed confirmatory appearances—considerable interstitial fibrosis, with atrophy of tubules and glomeruli.

The bladder is contracted, containing only about half an ounce of urine; its wall is of normal thickness.

Nothing abnormal is to be found in the prostate or urethra.

The peritoneum contained a few ounces of blood-stained serum; there was no peritonitis.

The heart is hypertrophied, and weighed 14 ounces. The hypertrophy especially affects the left ventricle, the wall of which is fully five-eighths of an inch in thickness at places.

The remaining organs show no conditions worthy of note.

The case was discussed, especially with regard to the suppression, by Dr. Andrew (who had seen a similar result of operation), Mr. Maylard, and Mr. Rutherford. The stoppage of the function of the affected kidney might be regarded as due to the disease or the operative interference, but the stoppage in the other was less easy to account for. Dr. Rutherford suggested that it was not reflex, but that the suppression of the function of the one kidney led to such sudden overstrain of the other that it simply became overpowered and ceased to act.

IV.—AN EYEBALL THE SEAT OF CHANGES SECONDARY TO
CARCINOMA MAMMÆ.

BY MR. H. E. CLARK.

The specimen, not having been examined microscopically, was handed over to the Secretary for investigation. The particulars of the case will be recorded, along with the results of the investigation, in the report of a later meeting.

V.—SPECIMEN OF HYDRONEPHROSIS SHOWING OBSTRUCTION BY
BENDING OF THE URETER.VI.—HUMERUS THE SEAT OF RAPIDLY DEVELOPING SARCOMA IN
RELATION TO INJURY.

BY DR. H. RUTHERFURD.

These two specimens had not been examined microscopically. The entire report will appear in the proceedings of a later meeting.

VII.—CARD SPECIMEN.

By DR. RUTHERFURD.—An implantation cyst of finger, of twelve years' standing.

MEETING V.—8TH FEBRUARY, 1904.

The President, MR. A. E. MAYLARD, in the Chair.

I.—FRESH SPECIMEN.

BY DR. J. M. MUNRO KERR.

Dr. Munro Kerr showed a uterus which he had removed by abdominal hysterectomy on the day prior to the meeting. The operation was performed on account of malignant disease of the cervix complicating a pregnancy of about eight months. The malignant mass connected with the anterior lip was first removed *per vaginam* because of the danger of infecting the peritoneum if it were dragged up through the abdominal wound. Both uterine arteries were tied from the vagina.

Dr. Kerr then performed Cæsarean section, and extracted a living child. He then removed the uterus, and closed up the vagina and abdominal wound. The patient is at the present time progressing satisfactorily.

II.—LARGE SINGLE HYDRONEPHROTIC KIDNEY WHERE THE SYMPTOMS DURING LIFE SIMULATED APPENDICITIS.

BY MR. JAMES GRANT ANDREW.

On 11th December, 1903, there was admitted to the Victoria Infirmary, under the care of Mr. Maylard, a young man, aged 24, a clerk, said to be suffering from acute appendicitis.

In the absence of Mr. Maylard, I saw the case, and elicited the following history:—Three weeks before admission he was seized with pain in the right iliac region, not very acute, but sufficiently severe to keep him in his bed and send for his doctor. The pain was dull, constant, and accompanied by distinct tenderness and some swelling. There was constipation. With fomentations and opening medicine the pain lessened, and a week after the onset of his illness he ventured out, only to return with the pain worse than ever. During the night he had a rigor, and was sick, and vomited for the first time since his illness began. For the next fortnight the pain never left him, being at times very severe; the appearance of fulness became more evident with increasing tenderness, and it naturally seemed to the doctor that an abscess was in process of formation, and he sent him up to the infirmary as an urgent case.

On his admission to the infirmary it was noted that he was very pale and emaciated, much more than one would have expected from the duration and supposed nature of his illness. His tongue was covered with a uniformly dirty fur. The abdomen was not generally distended; but in the right iliac region, extending backwards towards the loin, and upwards towards the costal margin, there was a distinct feeling of resistance, tender to touch and dull to percussion. Fluctuation could not be made out.

A purulent discharge could be expressed from the penis, and he then stated that, four weeks before admission and one week before the onset of his illness, he had contracted gonorrhœa. The urine was alkaline, with a specific gravity of 1023, and contained both pus and albumen. We attributed the presence of the albumen to the pus. Everything else was negative.

For three days he was kept under observation, and his

pulse, temperature, and respiration taken every four hours. His temperature ranged between normal and 101° , his pulse between 80 and 100, and his respirations averaged 22. The quantity of his urine was not noted; the frequent desire to pass urine was put down to his gonorrhœa.

Four days after admission, on 15th December, he was anæsthetised. When under the anæsthetic, the swelling was more pronounced and distinct fluctuation was made out. The muscles were separated as for an appendicectomy. When the transversalis fascia was divided, it was noticed that the peritoneum was in front and the swelling extra-peritoneal. On puncturing the thin wall of the cyst, the fluid that first appeared was clear; it smelled strongly of urine, and latterly contained pus in some quantity.

It was then ascertained that the swelling was a large hydronephrotic kidney; the different distended calyces could be readily felt by the examining finger. A large drainage-tube was inserted, packed round with iodoform gauze. During the afternoon and evening the dressings had frequently to be changed, being soaked with urine. A catheter was passed into the bladder in the evening by the house surgeon, Dr. Cross, but no urine was passed. On the following morning we found him much collapsed, and, as no urine appeared by catheter, though the dressings were wet, we regarded the condition as one of acute suppression, and tried, in addition to other remedies, a hot wet pack, but with no benefit. He died on the following morning.

The following is the report by Dr. John Anderson:—

“Examination of fluid obtained at operation from a hydronephrotic kidney.—The quantity of fluid sent down for examination was about a pint and a half. A considerable amount of pus had sedimented in the bottom of the basin. The fluid had a specific gravity of 1012; alkaline reaction, highly albuminous; slight blood reaction; no sugar. Films were prepared from the pus, but no micro-organisms were found.

“Summary of post-mortem examination: External appearances.—The body is well developed but slightly emaciated. Rigor mortis pronounced. Pupils equal and medium. There is an operation wound in the right iliac region, $3\frac{1}{2}$ inches in length, in which there is present a light gauze drain and a rubber drainage-tube. The opening is found to communicate with a cystic condition of the right kidney.

"*Thorax*.—Pericardium healthy. There is a slight hypertrophy of the left ventricle of the heart; the heart in other respects is quite healthy. The lungs are non-adherent. On section they show slight congestion.

"*Abdomen*.—Stomach, intestines, liver, spleen, and pancreas present normal appearances. The adrenals are of large size, but otherwise healthy. There is an absence of the left kidney. The right kidney is situated lower down than normal, and occupies principally the right iliac region. The upper margin extends into the lumbar region. The organ is somewhat movable, and is greatly enlarged, measuring 8 by 5 by 3 inches. It is greatly altered in appearance, resembling the horse-shoe kidney in shape, and is in a condition of hydronephrosis. The pelvis and calyces are dilated, especially the latter, which form a series of cystic cavities. Several of the cavities show a congestion of their lining membrane, and their contents are of a purulent character. The ureter is dilated throughout its entire length. The bladder is healthy. The left ureter is transformed into a fibrous band, and could not be traced out further than the brim of the pelvis. The membranous portion of the urethra is congested."

The special points of interest in this case are:—

(1) *The resemblance of his symptoms to those of appendicitis*.—The more or less sudden onset, the pain, tenderness, and feeling of resistance in the right iliac region, the occurrence of shivering, sickness, vomiting, suggested the appendix as a possible source of the mischief. This seemed all the more likely from the fact that there was no previous history of illness nor of intermittent urinary flow. The frequency of micturition and the presence of albumen and pus I attributed to his gonorrhœa. It was only when the swelling was examined under the anæsthetic that doubt entered my mind as to the accuracy of the diagnosis; the tumour then seemed much too large and definitely circumscribed to be an abscess connected with the appendix.

(2) *The part played by the gonorrhœa*.—I have no doubt, in spite of the fact that no gonococci were found in the pus removed from the kidney, that the kidney had become infected from this source, and a hydronephrosis, which was simple up to that date, converted into a pyonephrosis. The incidence of the acute abdominal symptoms occurred a week after the onset of the gonorrhœa. It is right to state, however, that the only part of the urinary tract, apart from the

kidney, visibly affected was the membranous part of the urethra.

(3) *The comparative rarity of single kidney.*—I cannot find anywhere, even with the kind assistance of Dr. Duncan, the proportion of single to double kidney. Isolated lists of cases of single kidney are published, but no percentages given.

As to the cause of the hydronephrosis, Dr. Anderson is of the opinion that this was due to the mobility of the kidney, and that this mobility was the result of the large size of the kidney, causing it to sag down into the position it principally occupied—the right iliac region.

III.—EXHIBITION OF SPECIMENS OF THE EXTIRPATED PROSTATE (FREYER'S METHOD), WITH MICROSCOPIC EXAMINATION, FROM DR. PARRY'S CASES.

BY DR. JOHN ANDERSON.

I feel that it is unnecessary to make any comment on the subject of total extirpation of the prostate according to Mr. Freyer's method, as the subject has been so fully dealt with already, and especially after the papers on this subject in the recent number of the *British Medical Journal*.

My reason for showing Dr. Parry's specimens to-night is that I may record the results of their examination. At the December meeting of this Society Dr. Parry showed one of his specimens, and read notes of the case. This specimen had been mounted for demonstration purposes, and had not been examined microscopically previous to the meeting. After the meeting, I promised to examine it and report the results of the examination, together with those of the previous specimens which had been examined.

The points which have been frequently raised in connection with this operation are now pretty well settled.

The term "total prostatectomy" can be used only in a surgical sense, and the operation, as performed, attains practically such a result. The capsule which is left after enucleation is an outer layer of flattened prostatic tissue, bounded externally by the fibrous tissue derived from the recto-vesical fascia. In the cases where the tumour mass has been shelled out as a whole, the prostatic urethra is, as a rule, removed with it. Partial separation of the urethra from the glandular masses can be performed in a number of cases, and more easily when they form lateral masses; but the preservation

of the prostatic urethra intact is regarded as unnecessary, and no case of stricture has been recorded as a result of the operation.

The specimens which I am showing are from four cases, while control examinations were performed on two occasions on the cadaver, and specimens examined from them. The specimens were of the usual type of the prostatic enlargements—either adenomatous or fibromyomatous.

CASE I.—The first case is the one shown at the December meeting, from a man aged 55. The weight of the specimen is $2\frac{1}{2}$ ounces, and was shelled out as one mass, bounded by a concentric extended layer presenting a capsule-like character. The specimen measures 3 by $2\frac{1}{4}$ inches by $1\frac{1}{2}$ inch, and the right lobe is the larger of the two. The prostatic urethra is present in the specimen for about 1 inch in length.

Microscopic examination shows the tumour to be of the adenomatous type. Urethral epithelium is present on the inner aspect lining the canal; while the outer layer, the cortical portion, consists of concentric flattened prostatic tissue.

CASE II.—Removed from a seaman, aged 66. The specimen measures $1\frac{1}{4}$ by $1\frac{3}{4}$ by $\frac{7}{8}$ inch, and weighs three-quarters of an ounce. The enlargement is chiefly of a concentric character around the urethra, portions of which are present in the specimen.

Microscopic examination shows the specimen to be principally of the nature of a fibromyoma.

The peripheral portion contains prostatic tissue out to the extreme margin.

CASE III.—Removed from a shoemaker, aged 52. Prostatic symptoms of six years' duration. The specimen is an enucleated prostate, consisting of an ill-defined right and left lobe, and measuring 2 by $2\frac{1}{4}$ inches by $1\frac{3}{4}$ inch. Part of the prostatic urethra has been stripped from the gland, while a portion still remains attached.

Microscopic examination shows the characters of the fibro-adenomatous enlargement. The tumour tissue is arranged in definite nodules. The fibrous tissue is not abundant, and the glandular spaces show dilatation at different parts of the sections.

The outer layer of the specimen contains flattened glandular acini.

CASE IV.—Removed from a brassfinisher, aged 57. The specimen is portions of an enlarged prostate, shelled out in separate masses. They weigh $1\frac{1}{4}$ ounce. There is no indication of the presence of prostatic urethra, and the specimens are entirely made up of fibro-muscular tissue.

IV.—CARD SPECIMEN.

BY DR. JOHN ANDERSON.

Microscopical sections from colon in case of fæcal concretion in the ascending colon, shown by Dr. Parry at the December meeting of the Society. Through a misunderstanding, a note was added to the report of the proceedings of the Society on 14th December, 1903, that this case had proved to be of malignant nature. Dr. Anderson, however, reports that the colon shows hypertrophy of the muscular wall, but no indication of malignant or fibroid stricture.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1903-1904.

MEETING VII.—16TH DECEMBER, 1903.

The President, DR. CHARLES R. M'LEAN, in the Chair.

I.—A TESTICLE STRANGULATED BY TORSION OF PEDUNCULATED MESORCHIIUM.

BY MR. GEO. HENRY EDINGTON.

History of the case.—In September, 1903, a woman brought a child, æt. 7 months, to the Dispensary of the Children's Hospital, and said there was something wrong with the genitals of the child.

On examination, Mr. Edington found a large swelling occupying the left half of the scrotum, and extending to the abdominal ring. It was evidently neither a hydrocele nor a hernia. The skin was hot, glazed, and œdematous.

General condition.—The child made no noise on examination, the smile never left his face, and he had slept well during the night on which the swelling appeared. He (Mr. Edington)

thought that the case was one of inflammation of the scrotum, but on second thoughts it occurred to him that as the skin was so acutely inflamed the testicle might be involved. The cord was normal, and there was no protrusion of the abdomen.

Operation.—On cutting down on the scrotum, blood and serum flowed from the cuts made (half an inch to three-quarters of an inch in extent), and on opening the tunica vaginalis he observed that the testicle appeared like a grape with the bloom on it. When he pulled out the epididymis he found it had the same bloom-like character. He removed the testicle right out of the scrotum, packed the cavity, and got it healed in two weeks.

Specimen.—This differed from the normal testicle, as it hung loose, and was only attached to the posterior wall by a thin pedicle—it was a mesorchium. The nomenclature of the gut has some points of interest, *e.g.*, parts of the intestines are found with, and some parts without, attachments, and at those parts where the gut has this connection, it is termed mesentery, where the blood-vessels pass in by it.

The testicle lies behind the tunica vaginalis, and he preferred the term mesorchium in those cases where it did not extend all the length.

The testicle measured in the vertical direction $1\frac{1}{2}$ centimetres, and had been twisted round the mesorchium.

On taking it out, he found that the twist could be undone, although it had existed for twenty-four hours. Though the operation had been done earlier, there would still have been atrophy of the testicle, which occurs after fifteen hours from this condition.

Points to be noted.—(1) Age of the patient, 7 months; (2) descent of the testicle was complete; (3) no complaint by the child, who was absolutely well, except for the inflamed condition of the scrotum, which had caused medical advice to be sought for. There was no history of accident. Regarding the operation, there was no serum or blood found in the tunica vaginalis, which was empty, and had extended up the cord, and which, therefore, had greater play. This might result in giving the testicle a twist round its pedicle in the case of a mobile testicle in a roomy tunica vaginalis; this would be assisted by the well-known activity of the cremaster muscle, and thus matters might have been going on from bad to worse. He thought this was the most likely explanation.

Difficulty in diagnosis.—In acute swelling of the scrotum, he would cut down. In a case of a child he operated on a few days ago for a swelling of the right side of the scrotum, there

was no torsion, but an acute abscess in the tunica vaginalis. Microscopically, diplococci were found in the pus cells.

II.—PAIN IN THE BACK.

By DR. DAVID COUPER.

Dr. Couper read a paper introducing a discussion on "Pain in the Back."

He discussed pain in the back arising from various causes. Among these he mentioned pain associated with catarrh or excoriation of the cervix uteri, neurotic conditions, spinal irritation, coccydynia, gout, lumbago, acidity of urine. He also considered pain between the shoulders associated with a dilated stomach in patients of a neurotic type. Heart conditions, aortic aneurysms, and caries of the vertebræ were also enumerated.

Treatment.—Rest and counter-irritation he found to give immediate and permanent relief in coccydynia. Genital trouble in the male—orchitis or gonorrhœa—was not, as a rule, accompanied by pain in the back.

In considering pain due to gout and rheumatism he referred to fascial crepitation—a sound not unlike pleural friction.

Dr. John Patrick referred to pain in the back associated with the presence of oxalate of lime crystals in the urine, and remarked upon the difficulty of diagnosis between renal colic and this condition, and advocated persistent treatment by alkalies in case of doubt. The difficulties in dealing with cases where pain in the back was complained of after injuries were pointed out—the application of the actual cautery being of no avail in a case related, where electrical treatment was now being tried. Pain in the back due to chill might be exceedingly severe, and such a case, he found, did not yield to anti-rheumatic remedies.

Dr. John W. Findlay remarked upon the prevalent idea in the public mind that pain in the back was due to kidney disease—this idea being fostered by the widespread advertisements of backache kidney pills—and pointed out that in inflammation of the kidney parenchyma there is no pain, though pyelitis might be a cause of pain.

Dr. Battersby mentioned a case where pain in the back was an accompaniment of gonorrhœa; also a case of backache from chill successfully treated by sodium salicylate and potassium iodide.

Dr. Russell agreed with *Dr. Couper* as to the absence of pain in the back in orchitis. In obscure pains in the back, he pointed out the danger of assuming that the patient was malingering—a case of sudden death being quoted in illustration of this.

Dr. Jas. Dunlop spoke of the treatment of lumbago by massage of the muscles. He considered that one should not be too ready in suspecting a man of malingering.

Dr. D. M'Kail had used A.B.C. liniment in lumbago, and belladonna and chloroform liniments applied on lint covered with oil silk.

Dr. P. S. Buchanan had found sodium salicylate, combined with alkalies and full doses of *nux vomica*, of great value in the treatment of acute lumbago.

Dr. Wm. Findlay thought that *Dr. Couper* had been unhappy in the presentation of his subject, which was too large, and could only be discussed in a haphazard way. Random discussion of such a wide subject was of little value.

Dr. Couper briefly replied on the whole subject.

GLASGOW NORTHERN MEDICAL SOCIETY.

THE Society held the second special meeting of the session in the Western Infirmary on 19th February. *Dr. Connal*, in the absence of the President, took the chair.

DR. MACKINTOSH, having welcomed the Society to the Western Infirmary, proceeded to show several cases which had been under treatment in the electrical department. The patients shown were ones which had been under treatment for some time, in which there was something to show. Medical men were anxious at present to ascertain what classes of patients were suitable for the various forms of treatment. All the cases shown were not cures, some being still under treatment, while others had recurrences.

1. A girl, *æt.* 21, came up first in December, 1901, with lupus of the nose. Patient was a tubercular subject, with various lesions. Photos taken when patient first came under treatment, and also a year later, were shown. Only a white cicatrix is now left.

2. A man, *æt.* 68, had an ulcer on the dorsum of the hand, which followed an injury. The ulcer was foul; there was

almost no surrounding infiltrations; and the glands in the axilla were enlarged, probably from the septic condition. A photo taken on admission was shown, as also the result after exposure to the *x*-rays. A section was also shown under the microscope to demonstrate the epitheliomatous character of the growth. A special tube was shown for *x*-ray work, which only produced *x*-rays at the point.

3. A man, æt. 73, began treatment in September, 1902, by *x*-rays for rodent ulcer. He now returned after an interval, and the skin was whole, there being a very faint scar on the nose.

4. A woman, who began Finsen light treatment in December, 1901, for a tubercular hand, now returned after an interval of ten months, the condition being much improved.

5. A woman, with old-standing lupus of the nose, had had fifty-one exposures to *x*-rays, and then was treated by Finsen light. Returned after an interval of four months. Healed with deformity.

6. A girl, with lupus of the nose, began treatment in December, 1901. Her attendance had been irregular, but she had been much improved. She was now being treated by *x*-rays for a recurrence on the lip.

7. A man, with tubercular hand, had been tried with *x*-rays, and had got a bad burn—the old form of tube being more dangerous. He was now having Finsen treatment, and was much improved.

8. A woman, had been treated for lupus from December, 1901, till March, 1902. She then had a recurrence in May, 1902. She had previously been treated by Finsen, but *x*-rays from special tube were now being tried.

9. A girl, with lupus of the arm, began treatment in June, 1902. Treatment had been stopped for a year—part in centre now appears healed.

10. Case of lupus of the face treated by *x*-rays, and improved.

One or two questions having been asked and answered, Dr. Connal, in the name of the Society, thanked Dr. Mackintosh for his excellent demonstration.

DR. WALKER DOWNIE next gave a demonstration on suppurative affections of the accessory sinuses of the nose, illustrated by lantern slides, patients, and specimens.

He first showed a series of six cases which had been operated on for inflammatory conditions of the frontal sinus. These cases had been operated on at various times—some a

few months previously, and others as far back as five years ago. In some cases the scar was invisible, and in others there was a distinct depression. A series of stereoscopic photographs, illustrating the condition in these cases prior to and immediately after operation, were shown. A series of lantern slides, illustrating the accessory sinuses of the nose, were next shown and demonstrated.

Dr. Downie pointed out that these accessory sinuses were divided into an anterior and posterior set; the anterior consisting of the frontal sinus, the anterior ethmoidal cells, and the antrum of Highmore, while the posterior consisted of the posterior ethmoidal cells and the sphenoidal sinus.

The antrum of Highmore is of particular importance, as are likewise its boundary walls. In the first place, the nasal wall is divided by the inferior turbinate bone into two. Through the upper part, which is partly membranous, the ostium maxillare opens into the nose. The antrum forms a triangular cavity, with the base toward the nose. The level of its floor is frequently higher than that of the nose, and so it is better to tap, where this requires to be done, high up, under cover of the inferior turbinate. Where there is an accumulation of material in the antrum, the patient should be asked to bend the head forward and to the opposite side, in order to empty the antrum. On the other hand, in some cases, the floor of the antrum may extend below the level of the floor of the nose, and here, on rare occasions, the fangs of the teeth may project through. The cavity of the antrum is irregular, and not perfectly smooth, and so fluids are easily retained. The facial wall of the antrum lies between the canine and molar ridges. Projections in the floor indicate the roots of the teeth. The first and second bicuspids and the first molar come nearest the floor. With regard to the inflammatory affections of the antrum—

1. A simple catarrhal inflammation may occur, with secretion of mucus. This condition is frequently associated with nasal catarrh, and tends to spontaneous cure if the ostium remain open; but, if it be blocked, suppuration may follow, the patient complaining of pain, a feeling of fulness, &c., over the part. In such cases one should apply warmth externally and decrease the turgescence within the nose.

2. A suppurative condition may arise from a simple or a septic catarrh of the nose, or from influenza, and may be associated with other inflammations. Here the patient complains of pain over the cheek, and there is a purulent, intermittent, unilateral discharge, and occasionally a fulness of the

cheek. A unilateral purulent discharge occurring in the adult is probably due to an antral empyema, while, in a child, such a discharge is generally due to a foreign body. In these cases, an odour is complained of by the patient which is not felt by those around, whereas in ozæna, the patient, owing to the sense of smell being blunted, does not perceive the odour, which is marked and offensive.

The pus, in these cases, often runs back to the throat, causing a sickly taste, and neuralgia is also sometimes complained of. Pus in the antrum may also arise from a condition of the teeth. Usually, however, it only arises from an abscess at the root of a tooth, and not from simple caries.

In an acute suppurative process, there is deep-seated pain over the antrum, increased on pressure, and throbbing, both subjective and objective. There is also slight fulness and sudden unilateral discharge.

In the chronic form there is generally no pain—only the unilateral purulent discharge.

As to examination, one should first see that there is pus in the middle meatus, which may come from the frontal sinus, anterior ethmoidal cells, or the antrum of Highmore. The meatus should now be dried out, and the postural method tried, and then the meatus should again be examined, and, if the pus be coming from the antrum of Highmore, a bead of pus will generally be seen at the ostium. Another method of diagnosis is by transillumination, performed with a lamp in the mouth, with the lips closed, in a darkened room. If the antrum be healthy, it is generally fairly translucent, whereas if it contain pus, it is opaque.

The apparatus for this purpose was then shown, and diagrams of it were projected on the screen, and the method was demonstrated on a patient.

Diagnosis may be completed by tapping the cavity, either through the nasal wall, canine fossa, or alveolus, after extraction of a tooth.

Treatment.—In acute cases—hot fomentations; soothing steam inhalations, intranasal applications to reduce turgescence and to cleanse the surfaces should be employed; where these fail to relieve the cavity, it may be tapped. In chronic affections—all sources of intranasal obstruction, such as polypi, hypertrophied bone, and mucosa, should be removed. If the discharge persist, Dr. Downie recommended the performance of a radical operation through the canine fossa, under a general anæsthetic. He spoke against the common practice of tapping

and draining through an alveolar opening. He entered fully into particulars of the operation.

He next described the frontal sinuses and their relations, and drew attention to the fact that the frontonasal canal begins in the nasal part of the floor. This being the lowest level of the cavity, drainage, where the canal is patent, is complete. He exhibited many lantern slides illustrating the want of symmetry of the two sinuses, and their variety in size and shape.

Of the affections, he spoke of the acute catarrhal inflammations which accompany intranasal catarrh, and which tend to spontaneous cure; and, secondly, of acute suppurative inflammations, associated with influenza, sepsis, &c.

Slides were shown of cases where the external wall was distended by pressure from within, and others where perforation of the outer wall had occurred, leading to external abscess.

He described fully the operation for exposing the sinus in cases of frontal sinusitis, which is resorted to after all intranasal lesions have been rectified. He chooses the supraorbital incision, and, after removing the greater part of the anterior wall, clears out the cavity, removing polypi, &c., with a sharp spoon, and dilates the frontonasal canal. The cavity is packed with a long strip of antiseptic gauze, the end of which is brought out through a buttonhole incision close to and immediately above the inner canthus of the eye, after which the supraorbital incision is closed throughout its length. No packing or dressing is left in the frontonasal canal. Packing in the sinus is left for seven to fourteen days, and is withdrawn through the counter-opening. Thus, the wound heals by first intention, and, when the eyebrow is again grown, is practically invisible. Many photos of cases immediately after operation, after withdrawal of packing, and after eyebrow had again grown, were shown.

Dr. Downie also referred shortly to suppurative affections of the ethmoidal cells and of the sphenoidal sinus.

On the motion of the *Chairman*, a hearty vote of thanks was given Dr. Downie for his very interesting address and demonstration.

REVIEWS.

The Practice of Obstetrics, Designed for the Use of Students and Practitioners of Medicine. By J. CLIFTON EDGAR. With 1,221 Illustrations, many of which are printed in Colours. London: Rebman, Limited. 1903.

AMERICANS are famed for doing things on a big scale. As regards size and weight, Clifton Edgar's *Practice of Obstetrics* will certainly bear off the palm. In illustrations, too, it is unequalled. There are 1,221 illustrations (many printed in colours) in 1,060 pages. Many of these illustrations are new, and most of them are useful, but some are mere padding, such as pictures of tins for holding chloride of lime and carbonate of soda. As in other American books on obstetrics, we find a fair sprinkling of nude figures. A handsome woman taking a bath in the erect posture, makes a somewhat beautiful picture to the eyes of an admirer of the human form divine, but we do not think an obstetrician will learn much from it. The illustrations are all clearly executed. The text is also of a high standard, but varies somewhat.

The book is founded on Edgar's fifteen years of work in maternity hospitals and in bedside and didactic teaching, so that it is the result of experience and not a mere echo of the writings of others. It is divided into ten parts:—I, The physiology of the female genital organs; II, Physiological pregnancy; III, Pathological pregnancy; IV, Physiological labour; V, Pathological labour; VI, Physiological puerperium; VII, Pathological puerperium; VIII, The physiology of the newly-born; IX, The pathology of the newly-born; X, Obstetric surgery. This is a very convenient arrangement. The author discusses certain subjects, such as rape, which are not usually taken up in an obstetrical work. He gives no less than twenty-seven illustrations of different forms of hymens, ruptured and otherwise. He also deals with antenatal diseases of the foetus and monstrosities. He has illustrations of nearly all the known forms of monstrosities.

The parts dealing with the physiology and pathology of pregnancy, and the management of labour and the puerperium are very well written, but the mechanism of labour is not up to so high a standard.

The obstetric outfit he advises is a very complete one, in fact, rather too complete, for ordinary practitioners to carry. He insists very strongly on the use of sterile rubber gloves as a routine measure in all cases. He also strongly advocates very thorough sterilisation of the hands and fore-arms. Our experience of the use of rubber gloves has not commended them to us, and we do not think they are likely to come into general use in this country, neither do we think they are necessary provided proper precautions are taken to sterilise the hands and fore-arms.

In an appendix very elaborate forms for case-taking are given. We are afraid the very elaborateness will defeat the ends in view. To expect a student to fill in the many details asked, would be asking considerably more than one could justly expect.

The book is one which we can strongly recommend.

A Text-Book of Obstetrics. By J. CLARENCE WEBSTER, M.D.
London: W. B. Saunders & Co. 1904.

EVERYTHING written by Clarence Webster is read with interest by obstetricians, for his monographs on the *Anatomy of Labour and the Puerperium* and on *Ectopic Pregnancy* have placed him in the forefront of scientific workers. We were delighted, therefore, to receive his *Text-Book of Obstetrics*.

Careful perusal of the work, we are sorry to admit, leaves in our mind feelings of disappointment. The book as a whole drags, and students, we feel sure, will find it tedious and uninteresting, and after all it is really a text-book for students. We regret this exceedingly, for there is a vast amount of detail and valuable information in its pages. In the purely scientific parts of the book the writer is at his best. The pages on Placentation, Anatomy of Labour, and Tubal Pregnancy are worthy of special mention. We certainly know of no text-book in which these subjects are better discussed.

But a text-book in midwifery must consider the art as well as the science of the subject, and, indeed, it is in great part by the soundness and clearness of the practical teaching that it will be judged.

Now the book is disappointing from the practical standpoint. Take, for example, the remarks on "The Obstetric Examination." Surely abdominal palpation deserved a more careful and extensive description. Then, again, in discussing

occipito-posterior positions of the vertex the author mentions a variety of different treatments, but the one which is best, the grasping of the head in the one hand and rotating the shoulder with the other externally, is not clearly described nor emphasised as being the most useful. To simply enumerate methods is not the important part of a text-book except in so far it is of use for examination purposes. A clear description of what the author has found from his own wide practical experience to be the best should be put in the forefront, other methods being incidentally referred to or very briefly described. While reading the practical part of Webster's text-book we could never get away from the idea that the author was not writing from his own experience.

Regarding his teaching on those matters on which he decidedly gives his own personal opinions, we are at times inclined to differ from him. But the author has a right to his views, and we know that he has studied all that is best in the writings of the great obstetricians of the past.

We hope at a future time, be it in a new edition or be it in a completely new work on obstetrics, to have the author give us his own personal experiences and his reasons for the faith that is in it. Such a work, we feel certain, would be of the very greatest value and usefulness.

The Manual Treatment of Diseases of Women. By GUSTAF NORSTRÖM, M.D. With Bibliography. New York: G. E. Stechert. 1903.

THE author of this monograph is a strong supporter of most of the opinions and much of the practice of Thure Brandt. He does not, however, follow slavishly in his lead. His experience has led him to modify and even to abandon a few of Brandt's methods. For instance, he has quite given up the treatment in cases of prolapse of the uterus.

Now that Schauta, Schultze, Olshausen, Ott, Pinard, Auvard, and other eminent gynæcologists have advocated pelvic massage, Dr. Norström hopes that in the near future it will be generally received as one of the recognised modes of treating the diseases of women. He is convinced that in suitable cases, such as subacute and chronic metritis and parametritis, speedier and better results can be obtained by this treatment alone than by any other therapeutic measure.

In a future edition the author should study to be less prolix.

His frequent repetitions are tedious, and most of his somewhat rambling discussion on gynæcological pathology, which occupies fully one half of the volume, could be omitted with advantage.

Gynæcological Nursing. By NETTA STEWART, Sister in the Extra-mural Wards of the Royal Infirmary, Edinburgh. Edinburgh: Oliver & Boyd. 1903.

CONSIDERING the great advance of gynæcology during the past few years, it is remarkable that so few books on gynæcological nursing have been published, and that the few which have appeared are so incomplete. The present volume, as Sir Halliday Croom states in his short commendatory introduction, "seems therefore to fill an obvious want." Though it contains only 174 pages, yet, owing to the avoidance of any attempt to teach gynæcology and to the simple and direct style employed by the authoress, scarcely anything of importance has been omitted. It is pleasantly written, is thoroughly practical and useful from beginning to end, and throughout it shows abundant evidence of patient observation and mature experience.

It may interest some to note on p. 51, that in Edinburgh it is still the custom that "the bowels should not be allowed to move for a week" (!) after the operation of perineal repair, with the result, even in spite of the semi-starvation which is enforced, that the fæcal matter is "often so hard as to be liable to cause injury."

Natural Mineral Waters: Their Properties and Uses. Eleventh Edition. Revised and Enlarged. London: Ingram & Royle, Limited. 1904.

THE use of natural mineral waters seems to have extended very greatly in recent years, and the present volume may with advantage be kept close to his hand by every medical practitioner. He may look here for a short account of each water, with its chemical constitution and therapeutic uses. In a book distributed in this country we should have liked to see St. Ronan's in the list of table waters, and Moffat might have been mentioned among the sulphurous springs. However, as it is, the reader has a large number to choose from. A copy of the pamphlet will be sent free by the publishers to any medical man on application.

Ureteric Meatoscopy in Obscure Diseases of the Kidney. By E. HURRY FENWICK, F.R.C.S. London: J. & A. Churchill. 1903.

WE have pleasure in calling the attention of our readers to a volume dealing with a branch of genito-urinary surgery, exploring a region in a thorough, up-to-date manner. Apart from the fact that anything coming from the pen of such an illustrious author is sure to be good and instructive reading, this book is a remarkable production and *résumé* of a life-long study, written in the best possible style and taste.

It has eleven chapters worthy of our readers' indulgence. The chapters on "Rare abnormalities," "Renal hæmaturia, with and without pain," and "Urinary tuberculosis," are the most interesting to the general reader. The volume from beginning to end is interesting, and very well illustrated with clinical cases and diagrams. It is another example of the author's careful style and thoroughness, and never allows the interest of the reader to flag.

We see in it a book written by a specialist on a speciality which often carries with it a deal of tedious reading and unimportant detail. This volume is decidedly the exception. Although a great deal of it is out of the practical range of the general practitioner, and only within that of specialists and hospital surgeons, yet it provides instruction and knowledge for all.

The book is well got up, and should hold a place of importance in every medical gentleman's library. We can recommend it for perusal to the profession, for its lucid, precise, and interesting matter.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D.Lond., F.R.C.P., F.R.S.Ed. Vol. V. London: Macmillan & Co., Limited. 1903.

DR. ALLCHIN is to be heartily congratulated on the completion of this important work, in which he has borne a considerable part in addition to his duties as editor. The present volume, the last of the series, is also the bulkiest of the five, and we are disposed to think that elaboration of details has been carried further in the later articles than was the case in the first volume. The subjects considered are the diseases of the digestive system and of the liver; diseases of the peritoneum and of the vessels of the abdomen; diseases of the kidneys, and

diseases of the ductless glands. Much attention is paid to normal anatomy and physiology, and the articles on these subjects ought to be very helpful to teachers. The editor writes on the anatomy and physiology of the alimentary organs; on diseases of the stomach and intestines; of the pancreas; and of the liver in part. Dr. Bertram Abrahams writes on the diseases of the mouth, pharynx, and œsophagus; Dr. Bradford on diseases of the kidneys; Dr. John H. Bryant on diseases of the abdominal vessels; Dr. Sidney Coupland, with Dr. Abrahams, on diseases of the ductless glands; Dr. Alex. Crombie on sprue, and on diseases of the liver in part; Dr. Bertrand Dawson on the physical examination of the stomach and intestines; Dr. Robert Hutchison on food and diet; and Dr. Lazarus-Barlow on the bacteria of the alimentary canal. Dr. Barlow and Dr. Hebb take part in the contribution on diseases of the liver. Dr. Hale White writes on diseases of the peritoneum.

The volume bears the evidence of extensive knowledge and painstaking work on the part of the contributors, and it constitutes a fitting conclusion to what we recognise as a valuable addition to the medical text-books of this country.

The Practical Application of the Röntgen Rays in Therapeutics and Diagnosis. By W. A. PUSEY, M.D., and E. W. CALDWELL, B.S. London: W. B. Saunders & Co. 1903.

THIS book, which is, perhaps, the most systematic and exhaustive we have yet seen on the subject, is by two authors whose names are well known to all connected with *x*-ray work. It is divided into two parts. The first deals with the subject of diagnosis, and is written by Mr. Caldwell; the second is devoted to radio-therapeutics.

The first part contains eight chapters. It opens with a description of the essentials of an *x*-ray equipment. This is followed by a very full description of Crooke's tubes in use both for diagnosis and for treatment.

Next comes a chapter on induction coils and interrupters, and their management. In it the author makes the following noteworthy statement:—"In the present state of affairs one must buy a coil which is rated at from 12 to 18 inches in order to obtain one which will deliver a 6-inch spark of sufficient volume for rapid radiographic work." The description of interrupters is very full, occupying twenty pages.

The next chapter is a short one on static machines. The next two are taken up with the subjects of fluoroscopy, stereo-fluoroscopy, and radiography. Details are given as to the best positions in which to radiograph the various parts. A short chapter is devoted to photographing, developing, printing, &c., and this section is closed with a chapter on the choice of an *x-ray* outfit.

In the preface to the second part, Dr. Pusey says:—"I have undertaken in the following pages to consider as carefully as I am able the authentic literature which has developed upon this subject, and I have supplemented that by as full a review of my own experience in that field as the subject seemed to warrant."

We think he has been very successful in the performance of the task to which he set himself. There are seventeen chapters. The first is on the effects of *x-rays* on the tissues. It is here pointed out that the reactions produced by exposure to *x-rays* are very similar to, though not identical with, burns produced by heat.

These reactions are usually called burns, and are divided into four classes—(1) dermatitis, dry and without destruction of tissue; (2) dermatitis, with formation of blebs; (3) destruction of epidermis; and (4) destruction of the whole skin and more or less of the underlying tissues. Those of the last class are said to have "an almost malignant tendency to persist," and it is stated that the dead tissue may not be thrown off for several months, or even a year. The author expresses the belief that epithelioma is likely to occur on the backs of the hands of *x-ray* workers who have a "persistent chronic inflammatory process" going on, and he reports two cases in which epithelioma developed in the scars of *x-ray* lesions.

There is a very instructive chapter on the histological changes produced by *x-rays*, both in normal tissues and also in diseased conditions, such as psoriasis, lupus, carcinoma, and lepra.

In a chapter entitled "Cause of tissue changes after *x-ray* exposures," the author asserts that "the fact that organisms in the living tissue can be destroyed by exposure to *x-rays*, while the same organisms in inert cultures are uninfluenced by *x-rays* exposures, proves positively that it is not the influence of *x-rays* *per se* that causes this destruction, but that the tissues themselves . . . play the important rôle in the germicidal process." Then follow thirty pages on technique, in which the methods of six *x-ray* workers are given in detail. On the subject of "Indications for the therapeutic use of

x-rays," the author mentions about twenty different diseases in which x-rays can be profitably employed, and says "the effects of x-rays which offer possibilities of therapeutic application are as follows:—(1) Their effect in causing atrophy of the appendages of the skin; (2) their destructive action upon organisms in living tissues; (3) their stimulative action upon the metabolism of tissues; (4) their power of destroying certain pathological tissues; (5) their anodyne effects."

The following nine chapters occupy about two hundred and forty pages, and are taken up with a description of one hundred and fifty-eight cases treated by Dr. Pusey, with very full references to the results of other workers in the same field. They are abundantly illustrated with photographs taken before and after treatment. Some of the groups of cases are very large; thus, in hypertrichosis, the conclusions are drawn from the results of treatment of about eighty cases. The book closes with a short chapter on "General conclusions," in which Dr. Pusey states it as his opinion, that instead of x-ray treatment of malignant diseases increasing the danger from metastasis, as has been stated, it probably lessens it.

The book indicates very fully what has been done with the Röntgen rays, and gives clearly the technique. It is undoubtedly a standard work on the subject. We need only add that it is well printed and bound, and that the illustrations are excellent.

A Manual of Operative Surgery. By SIR FREDERICK TREVES, Bart., K.C.V.O. New Edition, revised by the Author and JONATHAN HUTCHINSON, Jun. In Two Volumes. London: Cassell & Co., Limited. 1903.

THIS new edition of Sir Frederick Treves' well-known *Manual* appears nearly twelve years after the work was originally issued. The work does not weary or confuse the reader by excess of detail, but it gives a good *exposé* of what the authors believe to be the best methods of operating at the present day.

We must confess to surprise that no mention is made of Kennedy's operations for birth-palsy and for tic convulsif. Similarly, there is no notice of the operation of tendon-lengthening which is quite recognised, and, indeed, is much in evidence at the present time. Again, Ogston's method of operating in talipes equino-varus is conspicuous by its absence. In treating of osteotomy of the femur, the reference to Fig. 179 is rather confusing (vol. i, p. 550). In extreme genu

valgum the line *A B* passes into the *lower* part of the external condyle. This is clearly a slip, but, as regards the omissions noted above we must own to a difference of opinion with the authors of this work. Notwithstanding, we welcome the *Manual* and can, we think, safely predict for it a wide appreciation.

The Exact Science of Health, based upon Life's Great Law.

By ROBERT WALTER, M.D. Vol. I: Principles. New York : Edgar S. Warner Publishing Co.

"THE Argument," which prefaces the preface in this work, gives the reader something to think about, whatever may be the result of his thoughts. It is here stated that the "primitive fact" of physiological and medical science has been discovered, and found to be in perfect analogy with Newton's law of gravitation. Further, "the primal element of every primitive fact" is the force or power which performs all the work of its department. These two, the force and the law, which are inseparable, constitute the primitive fact of the science, which explains, only because it produces, all its phenomena. Force controlled by law, or law sustained by force, as one chooses, accounts for all that *is*.

The preface itself contains a large number of assertions which quite sufficiently indicate the trend of the contents of the volume as a whole. A few extracts from the preface will show this decisively enough to satisfy even the discoverer of "Life's Great Law."

"We note another leading and parallel thought which appears in both chemistry and medical science—they have sought to accomplish the impossible. The one would transmute the baser metals into gold, and the other *the baser forces into life*" (the italics are the reviewer's).

"Vaccination, antitoxin, the cure for consumption, and a host of other inventions, were never of more doubtful value than they are to-day."

"Can the reader point to a single name of national reputation who has recovered from dangerous or even serious illness during the past few years? It is the president, ex-president, vice-president, generals, governors, senators, ex-speakers, bishops, who die; the tramps and day-labourers usually recover."

"Through this work, human health becomes as certain and reliable as chemistry and astronomy, we had almost said as

mathematics, and we are not sure but we would be within the bounds of truth if we had so said." The author seems to be in just a *little* doubt as to the inclusion of mathematics. Why so?

"Notwithstanding the boasted antitoxin, it is to be noted that diphtheria still continues more fatal than small-pox, and that the percentage of its mortality is claimed to be reduced fifty per cent by doubling the number of cases." This last might conceivably, under other circumstances, be a serious allegation.

The preface concludes with a quotation from Professor Jevons' "Principles of Science," with which all the readers of this present volume will agree.

The seventeen chapters and addenda which form the remainder of the volume do not call for detailed criticism, as they follow strictly the lines already described. In the "Review" of questions and answers at the end of each chapter will be found many interesting questions and still more interesting answers. Numerous quotations and scraps of poetry find places in the pages, but these seem superfluous in demonstrating "Life's Great Law."

Any practitioner who feels that he is in danger of falling into a narrow groove of thought with regard to present-day medical and surgical methods of treatment is recommended to peruse this volume.

The book is well bound and printed. It bears no date.

The Physiognomy of Mental Diseases and Degeneracy. By JAMES SHAW, M.D. Bristol: John Wright & Co. 1903.

SOME of the papers contributed by Dr. Shaw to various issues of the *Medical Annual* are here reproduced. In addition, the author is indebted to a few other authorities, notably Dr. F. Peterson, for illustrations and material assistance in the chapter on degeneracy. The illustrations throughout the book are numerous and beautifully executed. The importance of physiognomical facts in the insanities of mind and degeneracy is greater than in any other department of medicine, not only from a diagnostic and prophylactic point of view, but also from a legal aspect. Dr. Shaw clearly recognises this importance, and has based his conclusions on very convincing data. The book, as a whole, reflects nothing but credit on the author and publisher alike.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

MEDICINE.

By JOHN G. GRAY, M.D., F.F.P.S.G.

Hæmorrhage in Ulcer of the Stomach and Duodenum: Perforation into the Heart.—A paper on this subject, by Kr. Thue, appeared in the *Norsk Magazin f. Lægevidenskaben* of March, 1903. Special interest attaches to the description of three cases which proved fatal. In all, fifteen cases were observed; they were under treatment in the department for men of the City Hospital, Christiania, during the years 1900, 1901, and 1902. Of these, three ended fatally from profuse hæmorrhages.

CASE I was that of an artisan, 48 years of age, who had suffered from gastric symptoms, and in particular from morning vomiting for eight years. He had been addicted to drink. He complained of pain in the epigastrium and left hypochondrium. Later, cough developed with abundant expectoration. Examination of the chest afforded ground for the suspicion of left-sided pneumothorax. There was bulging of the lower two-thirds of the left thoracic wall, with diminution of movement, and the respiratory murmur was strikingly weak. The percussion note was, at first, hyper-resonant; later, tympanitic. Occasionally, amphoric sounds with a metallic timbre were heard round the lower angle of the scapula, and, by using two silver coins as plessor and pleximeter and auscultating, a distinct metallic tinkle could be made out over an area of about the size of the palm of the hand. The heart was slightly displaced to the right.

A few months later, friction sounds were heard over the left base; there was also dulness, and, on introducing a hypodermic needle, serous fluid was found. No tubercle bacilli were detected in the sputum. After being four months in hospital, the patient was dismissed improved.

Two and a half months later he returned on account of severe pains in the epigastrium and left hypochondrium, as well as over the whole abdomen. The signs suggestive of pneumothorax now appeared to be of less significance. Fluid was likewise found in the abdomen on the left side. On a few occasions, there was a fleeting rise of temperature—between 100·4° and 101·2°. The finding of fluid in the abdominal as well as in the left pleural cavity suggested the possibility of a tubercular basis. With rest in bed the fluid disappeared in a few months. Considerable improvement followed the repeated washing out of the stomach. When it was distended, the lower border did not reach below the level of the umbilicus. On introducing the sound on 18th November, 1902—twenty and a half months after coming to the hospital for the first time—vomiting of bright red blood, amounting to about 1,500 grm., suddenly occurred. Symptoms of collapse followed, the pulse being almost imperceptible. Salt solution was injected subcutaneously, as also camphor, and the patient improved slightly during the next few hours. The vomiting of blood, however, recurred during the night, and, half an hour later, patient died.

At the autopsy, extensive connective tissue formation was found in the mesocolon in front of the transverse and ascending colon, strong bands of fibrous tissue passing between the intestines and the anterior abdominal wall. Blood was found in the intestines. The mucous lining was intact.

The stomach reached high up within the thorax; it was adherent to the diaphragm. At the lesser curvature, close to the cardiac end, a cavity—looking from within—about the size of a hen's egg, was seen; it contained an

opening in the centre which just admitted a quill; it led into the left ventricle of the heart. Extensive pleural adhesions bound both lungs firmly to the chest wall.

CASE II.—An apprentice tailor, 21 years of age, who had always been healthy, complained of feeling unwell for two days, and on the day following vomited a few cupfuls of bright-coloured frothy blood, and, a few hours later, about 2 pints. Two days afterwards, the vomiting of blood began afresh, along with pain in the epigastrium. He was admitted to hospital, and, during the next few days, hæmatemesis occurred on several occasions; a condition of stupor ensued, and the patient died.

At the *post-mortem* examination, a large quantity of blood was found in both intestines, and the stomach was half filled with a chocolate-coloured serous fluid. Inspection of the mucous lining revealed the presence of an ulcer the size of the orifice of the ear, which had healed, and three fresh ulcers, all at the greater curvature. While a circular ulcer, 1 centimetre in diameter, was met with at the lesser curvature; erosion had taken place into a branch of the coronary artery of the stomach.

CASE III.—This patient, who was aged 43, had suffered between twelve and thirteen years from severe attacks of pain in the neighbourhood of the ileo-cæcal valve. The pain radiated towards the back, and occurred usually after a meal. There was obstinate constipation, on account of which purgatives and enemata were employed. Suddenly, during defæcation, the patient began to vomit large quantities of blood. The pulse became almost imperceptible. The bleeding recurred two days later, when about 2 pints of dark-coloured blood were vomited; afterwards, slight attacks of hæmatemesis occurred, and death took place next day.

At the autopsy, a radiate cicatrix, the size of a mark, was observed in the duodenum, not far from the stomach. Lower down, at the arched part of the duodenum, there was a deep ulcer with steep edges, about 3 c.m. long and $1\frac{1}{2}$ broad, which led into the pancreas. In the bottom of the ulcer, the open lumen of a branch of the pancreatic artery which had been eroded was seen. The vermiform appendix was entirely normal. There was much constriction and puckering of the ascending colon just above the cæcum by adhesions.—(Max Salomon, *Deutsche Medicinal-Zeitung*, 11th February, 1904.)

Chronic Interstitial Nephritis.—A paper on this subject, read before the Birkenhead Medical Society on 11th December, 1903, by Dr. John Hill Abram, and reported in the January number of the *Liverpool Medico-Chirurgical Journal*, contains a number of points of considerable interest from a clinical and pathological point of view.

The writer states that, in the vast majority of cases he has examined (he was pathologist to the Liverpool Royal Infirmary for five years), the kidney cirrhosis has been out of proportion to the degree of vascular change, and that, as the result of his experience, he is unable to accept the vascular theory.

With regard to the presence of slight albuminuria, he is of opinion that in persons over 40 the probability of kidney mischief is great. He is in the habit of rejecting them in insurance work, and would not hazard a favourable opinion before observing them for a considerable time.

With respect to the connection between cardiac failure and renal disease, he differs from some writers, and notably Dickinson, in not regarding heart disease of long standing as a cause of granular kidney, and mentions that Von Leube and Chauffard consider the sequence to be less common than is usually supposed.

He attaches much importance to the presence of the *bruit de galop* in determining whether the heart or the kidneys are the essential seat of the disease, and says that when present it may turn the scale on the side of the kidneys. He attaches little weight to what Senator has stated regarding the presence of urates, viz., that they do not come down in scanty urine, stating that he has seen primary heart cases without, and secondary cases with, a deposit of urates.

To return to the *bruit de galop*, which, he maintains, is an added sound occurring during the diastole of the ventricle, the author noted it in eight out of the thirty-one cases—or, roughly, 25 per cent. He believes it to be due to loss of power in the ventricular wall, as it occurs also in myocarditis and arterio-sclerosis.

He states that when eye changes are recognisable by the ophthalmoscope, the prognosis is grave, most authors giving the duration of life as under two years.

The writer thinks that it is just possible that internal secretion in the organs referred to may play some part in the causation of uræmia. He refers to the influence which the kidneys exert upon metabolism, and the demand which the organism as a whole makes on the internal physiological action of the kidney, alluding to the non-success so far in the administration of renal extract.

The writer then proceeds to give an analysis of the cases of this disease that came under his observation in hospital during the past year—twenty-seven were between 40 and 60 years; one 60 years; one 65 years; one 36 years; one 32 years; eighteen were males; thirteen females. Heredity was marked in one case, kidney trouble having shown itself in the mother and her two brothers.

The cases were placed in certain groups, according as one set of symptoms or another set predominated. These were cardio-vascular, nervous, respiratory, gastro-intestinal, and genito-urinary.

In the first—*cardio-vascular*—twelve were included. Of these, four died, one from uræmic convulsions, and one with severe hæmaturia; in this case, enormous varicose veins were found in the bladder.

Nervous.—Eight cases included; in one there was giddiness and tinnitus aurium; this patient improved satisfactorily. In another there was most marked hyperæsthesia of the skin; improvement took place. Three were in a state of coma when first seen. Hemiplegia was detected in two of these, and the *post-mortem* revealed hæmorrhage into the pons.

Respiratory.—A series of five cases. One had pleural effusion on admission, which was found to be hæmorrhagic. Improvement took place, and he left hospital in a month. He was re-admitted a month later, and again improved, and has remained in fair health. One suffered from a low type of pneumonia; the kidney condition was confirmed after death. Three were admitted for dyspnoea; all three improved.

Gastro-intestinal.—Comprised three cases; one came for vomiting, one for diarrhoea, and one on account of dyspepsia. They all improved.

Genito-urinary.—Also three cases; one was admitted for metrorrhagia; improvement took place in all.

SURGERY.

By JOHN PATRICK, M.A., M.B.

A Danger in the Use of Adrenalin.—Friedrich Neugebauer, in the *Centralblatt für Chirurgie*, 19th December, 1903, describes some cases in which he used a solution containing adrenalin and cocain, or eucaïn, with the object of combining local anæsthesia and local bloodlessness. The preparation used was Parke, Davis & Co.'s. His first case was a good test of the usefulness of the mixture; he removed a chronic purulent gland of Bartholini with complete success, and although the part is one rich in blood-vessels, the bleeding was very materially lessened. But the next three cases were followed by gangrene of the skin. The first was a circumcision in a strong young man of 28. The injection, consisting of 3 drops of the extract in 1 c.c. of a half per cent solution of cocain and eucaïn, was made into the tissues of

the prepuce. Gangrene of both mucous membrane and skin followed in the whole of the operation area, except the frænum, quickly and without inflammatory reaction or fever. The other two cases were moderately extensive plastic operations for removal of rodent ulcers, about the size of a shilling, situated at the angle of the nose in women, aged 66 and 67 respectively; the flaps were not stretched unduly. The flaps in both cases became gangrenous, the destruction involving at least half the area of each flap.

These observations of gangrene following injection are not isolated. Another author suggests that the gangrene may be the sequel of artificially produced diabetes. But in the cases recorded no sugar was found in the urine after the injection.

Acute Dilatation of the Stomach.—Hoffman (Düsseldorf) reports in the *Centralblatt für Chirurgie*, 5th December, 1903, a case of acute dilatation of stomach operated on by him. The patient was a young man, spare in build, and rather thin in feature. The pulse was small, 130 in the minute; the temperature, 36 C. (96·8 F.) The abdomen was greatly distended and tender; in the left lower region was absolute dulness, with fluctuation. Vomiting, uncontrolled by any means, was severe, the vomited material being dark brown, sour smelling, but not feculent. The quantity of urine was greatly reduced, though it was not otherwise abnormal. A diagnosis, in the absence of any obtainable history of the case, of partial peritonitis with local accumulation of exudation was made, and as a kind of forlorn hope Hoffman decided to operate.

The incision was from the epigastrium to the umbilicus; on entering the cavity a large globular swelling presented itself, and this was the abnormally enlarged stomach. After fixing the stomach to the parietal peritoneum by a circular stitch, it was punctured, and there escaped 6 litres of dark brown fluid, with a large number of undigested pieces of cucumber. The pylorus and duodenum were quite patent. The abdominal wound was closed. On the following day the patient collapsed, and died.

The *post-mortem* examination showed great increase in size of stomach, with streaky hæmorrhages in the mucous membrane; the duodenum was widened, the bowel otherwise collapsed; the pancreas was enlarged and hard; in some places islands of necrosis were found. The other organs were normal.

In this case, therefore, acute dilatation took place after a serious dietary indiscretion in a young man who hitherto had not been known to have had any digestive disturbance. It is to be noted that this condition may arise in a person with some atony along with dilatation of the stomach, which, up till the present moment, has given no trouble. It was found out afterwards from the patient's father that he had been a voracious eater, and gulped his food incompletely masticated.

DISEASES OF CHILDREN.

By R. BARCLAY NESS, M.A., M.B., F.F.P.S.G.

Arrested Cerebellar Development. J. H. M'Kee (*Archives of Pediatrics*, vol. xxi, No. 1, January, 1904).—At a meeting of the Philadelphia Pediatric Society, held on 10th November, 1903, Dr. J. H. M'Kee showed a boy, 4 years old, regarded as affected with arrested cerebellar development. He had a remarkably good family history. The mother had never had a difficult labour, nor had instruments been employed when the boy was born. He did not have asphyxia neonatorum. His first year was uneventful, barring some unaccounted for "blue spells" when three weeks and when seven months old. He had never had any infectious disease. Indeed, his mother had noted nothing unusual about the child until he reached the age when he should have

talked and walked. He has never walked, and he did not talk until last summer. During the past summer he had six convulsions, two at a time, and following the first, internal strabismus appeared; but careful study of his eyes showed the boy to be highly hypermetropic. The most conspicuous nervous feature of his case is the marked ataxia that is exhibited in nearly every act he endeavours to perform. When he is assisted to walk, he throws his legs out like a patient with locomotor ataxia, and exhibits a strong tendency to fall backward.

Dr. Wharton Sinkler said that the chief interest of the case depended upon the differential diagnosis between cerebellar degeneration, or arrest of development, and Friedreich's ataxia. In cases of arrest of development, there is almost always a history of traumatism at birth, or of conditions that have led to hæmorrhage; but in this case there has evidently been either an arrest of development, or a degeneration in the cerebellum or in the cerebellar tracts, not dependent upon birth-injuries, giving rise to inco-ordination of movements and inability to walk. The speaker considered it an open question whether the case was one of arrest of development or of degeneration of the cerebellum. The fact of the child's having been so tardy in general cerebral development indicated an intracranial disorder rather than a cord lesion; therefore, he thought that the trouble must be regarded as cerebellar rather than of the cord. It resembled the cases of cerebellar ataxia that have been described. The condition was a rare one, and the experience in the past had not been wide enough to throw any light upon the pathology of the disease.

Dr. Hamill referred to an autopsy upon a new-born infant made by him in which marked bony deformities and an extremely small cerebellum had been found. The cerebellar fossa was just about one-quarter of the normal size. Dr. Hamill thought it interesting, in connection with the case just exhibited, to speculate upon the course that his case would have pursued had the child lived beyond the age of infancy.

Duchenne's or Erb's Paralysis and Facial Asymmetry.

Witmer (*Archives of Pediatrics*, January, 1904).—At a meeting of the Section on Orthopædic Surgery of the New York Academy of Medicine, Dr. Witmer showed a case of a young woman, 17 years of age, affected with paralysis of an arm (which, not stated) since birth. No instruments were used, but the birth was tedious. The injured arm was 3 inches shorter, and fore-arm one inch and three-fourths less in girth than the other. Associated with this paralysis was the fact that the face and chest on the injured side were much smaller than on the other side—possibly a marked case of so-called birth palsy. If so, involvement came from fifth and sixth cervical spinal roots, because the entire arm was affected, the extensors more so than the flexors (?). Electrical reactions normal; sensation normal; legs normal. The speaker thought, because of the extreme failure of growth and the fact that reactions to electricity were normal, the paralysis and the impairment of growth might be due to a cerebral lesion. The details of the case, however, are insufficiently reported, but in the discussion which followed, Dr. Clark spoke as follows, and his remarks are worth some attention:—

"Some three weeks ago, I saw Dr. Witmer's case to decide upon the feasibility of operation. I noticed the marked facial asymmetry. Since then, I have re-examined several other cases of Erb's palsy to see if the non-development of the face was uniformly present on the side of the arm lesion. I have found it present in all where the patient is sufficiently old to give us an asymmetry which might come from asymmetric growth. I explain this new condition in Erb's palsy upon the disuse theory:—The patient, in failing to use the paralysed arm and shoulder, fails, also, to give the normal impulse to growth in facial muscles and bone. The side of the face on the side of the lesion remains behind in normal growth. In comparing the asymmetry of the two sides in unilateral palsy lesions, such as Erb's palsy, we employ a hypertrophied standard on the sound side, just as in anterior poliomyelitis and infantile cerebral hemiplegia, owing to the excess development of the sound

side through extraordinary labour thrown upon that side. The close association of the cerebral areas of muscular movements for the face, arm, and hand, in the motor region of the brain, accounts for the face not developing when the arm remains paralysed from birth; it is essentially a lack of associated voluntary muscular efforts. If, on the contrary, these efforts should be prolonged over a considerable period of time, the face might not only show no non-development, but it might appear normal or even hypertrophied, as the partial palsy would serve to call out more persistent forced voluntary effort, thus calling into play the accessory associated movements in adjacent brain areas functionally allied, such as those for the face, when the arm is being used."

"I can see no good or necessary reason to invoke two nerve lesions to account for these cases. The characteristic symptoms of Erb's palsy, together with palpation of the site of the lesion at Erb's point, ought to make certain the diagnosis of birth palsy. Certainly I should not diagnose a cerebral lesion here, neither capsular nor surface hæmorrhage, where there are no convulsions, no facial immobility, no spasm or spasticity of muscles, no inco-ordination nor spontaneous uncontrolled movements, and where the weakness is most pronounced in the deltoid and biceps, and not distally, as in cerebral palsy; also where there has been no marked increase in the reflex of the facial muscles nor in any of the paralysed parts. Finally, we must bear in mind that the labour difficulty causing the two affections is different:—In birth palsy, as in this case, we have imperfect rotation of the trunk; the head is in extreme rotation, the shoulder is caught under the symphysis, and the tension and stretching of the fifth and sixth cervical spinal roots result when any attempt is made to force the delivery by pulling on the head. In cerebral birth palsies, the difficulty arises in the delivery of the head; it is compressed, and the labour is markedly prolonged and much asphyxia results."

DENTAL SCIENCE.

By J. DOUGLAS BROWNLIE, M.B., CH.B., L.D.S.

Syphilis.—A. Brunet (quoted in *Le Progrès Dentaire*) states that erosion of the first lower molar, in a subject whose other teeth are healthy, is a pathognomonic sign of hereditary syphilis. The first molars are the only teeth of the permanent set in which calcification occurs during fetal life.

It should be noted that the amount of calcification of these teeth which occurs during intra-uterine life is extremely small, and is confined to the tips of the cusps. The etiology of erosion, moreover, is very obscure, and a diagnosis of syphilis based on such an uncertain quantity would be quite unjustifiable.

Lymph Glands in Relation to the Teeth.—G. Morgan (*British Dental Journal*), who has studied this subject on patients at the Royal Alexandra Hospital for Children in Brighton, points out the relation between diseased teeth and more or less morbid glandular conditions which he believes to be almost invariably associated with them. His remarks apply to those groups of lymphatic glands which drain the teeth and gums. A healthy child which is living in good hygienic surroundings may have its teeth in a very bad condition, and yet show no trace of glandular enlargement. Even in such cases, however, the freedom from injury to the glands is only apparent, not real. This is proved by the greater susceptibility to injury shown by the glands. A slight strain under such circumstances often leads to a rapid enlargement of the gland, out of all proportion to the obvious cause. Measles and whooping-cough often produce the same effect in glands injured by carious

teeth, inducing a more rapid and more prolonged enlargement than occurs in glands not so injured. The author quotes cases in support of his views, and emphasises the importance of examining the condition of the mouth and teeth in cases of glandular enlargement of the neck.

Comparing the relative frequency of glandular enlargement due to the upper and lower teeth, he suggests that the greater freedom from injury of the glands receiving lymphatics from the area of the upper jaw and teeth is due to their being less exposed to vicissitudes of temperature and strain than those which receive the lymphatics from the lower jaw.

The portion of the paper summarised above has reference to teeth having living pulps, and is of interest as being supplementary, from the clinical standpoint, to the researches of Dr. Halle, who worked at the experimental side of the question.

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**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FIVE WEEKS ENDING 22RD APRIL, 1904.**

	WEEK ENDING				
	Mar. 26.	Apr. 2.	Apr. 9.	Apr. 16.	Apr. 23.
Mean temperature, . . .	42·6°	41·3°	45·1°	47·0°	48·6°
Mean range of temperature between day and night, . .	13·5°	14·6°	13·2°	13·6°	19·5°
Number of days on which rain fell, ...	4	6	7	5	3
Amount of rainfall, . . ins.	0·66	1·26	1·79	0·24	0·34
Deaths registered, ...	324	329	312	339	339
Death-rates, ...	21·2	21·5	20·4	22·2	22·2
Zymotic death-rates, . . .	2·1	1·8	1·8	2·1	2·5
Pulmonary death-rates, . .	7·3	7·3	7·0	7·3	5·7
DEATHS—					
Under 1 year, ...	63	49	55	66	69
60 years and upwards, . .	70	72	75	81	60
DEATHS FROM—					
Small-pox, ...	2	5	3	3	2
Measles, ...	15	12	8	12	19
Scarlet fever, ...	2	2	2	...	3
Diphtheria, ...	3	1	3	...	1
Whooping-cough, ...	4	8	6	7	7
Fever, ...	2	3	1	1	3
Diarrhoea, ...	8	7	3	7	6
Croup and laryngitis, . .	...	1	2	1	1
Bronchitis, pneumonia, and pleurisy, ...	87	75	67	74	60
CASES REPORTED—					
Small-pox, ...	18	22	33	43	31
Diphtheria and membranous croup, ...	11	6	21	15	13
Erysipelas, ...	17	7	16	23	19
Scarlet fever, ...	37	27	66	76	61
Typhus fever, ...	...	...	1	...	...
Enteric fever, ...	15	10	9	7	11
Continued fever, ...	...	...	1	1	1
Puerperal fever, ...	3	1	3	2	...
Measles,*	334	249	258	343	338

* Measles not notifiable.

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ORIGINAL ARTICLES.

OBSERVATIONS ON SOME OF THE NEWER REMEDIES
IN THE TREATMENT OF DISEASES OF THE EYE.¹

By JAMES HINSHELWOOD, M.A., M.D., F.F.P.S.G.,
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THE present is an age of new remedies in every department of medicine. This cannot be regarded as an unmixed blessing. Scarcely a day passes without our receiving a glowing account of some new remedy with an attractive name, with pages of testimonials as to the wonderful cures effected by this remarkable discovery. Experience, however, soon makes the practitioner very sceptical with regard to these glowing testimonials and wonderful results, as set forth in the pages of the drug advertisements. In his younger days he was perhaps very enthusiastic in trying all these newer remedies; but, as experience taught him the worthlessness of the vast proportion of them, he gradually diminished the drugs in his therapeutic armamentarium, retaining only those which have stood the test of long experience.

This holds true of all departments of medicine, and the treatment of diseases of the eye forms no exception. Rather,

¹ Read at a meeting of the Glasgow Eastern Medical Society, held on 2nd March, 1904.

I should say, it affords a conspicuous example of vaunted remedies and new lines of treatment which, when tested by the cold light of experience, are found to be utterly worthless. When we consider the complexity of the human organism, and the varying effects on different people of the same drug, it is not to be wondered at that mistaken conclusions are so frequently arrived at with regard to drugs and new lines of treatment. Before we are entitled to draw any conclusions regarding a particular remedy, we must have a very large series of observations.

Nothing is more absurd to anyone conversant with the laws of reasoning than to see men drawing broad inferences as to treatment from experience of a very limited number of cases. The sources of fallacy are so numerous in judging of the effects of remedies in the treatment of disease that we require prolonged experience of a remedy, and a very broad basis of observation, before we can arrive at any conclusions of value which are likely to stand the test of experience.

Whilst preserving a healthy scepticism regarding the numerous claims that are made for new drugs, we must all guard against the attitude of mind which can see no good in anything new, but is quite content to move placidly along in the old lines of treatment, without any aspiration or effort towards better methods.

Of recent years there have been a very large number of new drugs introduced into ophthalmic practice. My purpose in the present paper is to bring before your notice a few of these recent remedies which I have put to the test in hospital and private practice, and which I can recommend to you as a real addition to our therapeutic resources in dealing with diseases of the eye.

Adrenalin chloride solution (1 in 1,000).—Adrenalin is the active principle of the suprarenal or adrenal gland. It is not possible to make a solution of adrenalin by methods ordinarily available, and the adrenalin chloride solution keeps active for a long time, and is always ready for use.

This adrenalin solution has been used for a great variety of purposes, but I wish here to speak only of its uses in the treatment of diseases of the eye, where it has a real value, and is a distinct addition to our therapeutic resources.

Its important physiological effect as regards the eye is its power of contracting the arterioles and rendering the conjunctiva practically bloodless. For this purpose, it is by far the most powerful agent yet known to us. If you instil a

drop or two of the adrenalin chloride solution into the conjunctival sac, you will see in two or three minutes a profound anæmia of all the surface of the globe of the eye and of the palpebral conjunctiva. This anæmia, however, is only transient, its duration varying in different individuals, and, of course, varying also with the strength of the solution which we employ. Using the solution in full strength on the normal eye, the anæmia lasts from one to two hours. In diseased eyes, when there is congestion and hyperæmia, the effects of the adrenalin are both less intense and more transient. The more intense the hyperæmia the shorter the duration of the anæmia; but there is no congestion which will not disappear, for a short time at least, under the influence of repeated instillations of the adrenalin solution. As a rule, the adrenalin causes very little pain and discomfort on being dropped into the eye, and, when it does so, I dilute it with an equal quantity of water. Thus diluted, it is still a very powerful astringent, although, of course, less so than in the more concentrated form.

I have found this power of rendering the conjunctiva bloodless exceedingly useful in such operations as chalazion, tenotomy, and advancement of ocular muscles. This, of course, is a very great advantage to the operator, and very especially in such a delicate operation as advancement of ocular muscles. With a bloodless field, the operator can see exactly what he is doing, and thus can operate with a delicacy and precision which is otherwise impossible. For this purpose I would advise the use of the adrenalin solution in full strength, and to be used frequently for about quarter of an hour before the operation. My plan is to put a drop alternately of adrenalin and cocaine or holocaine into the conjunctival sac every few minutes for a quarter of an hour before the operation, so as to have a completely anæsthetic and bloodless field of operation. My experience is, however, that to secure this, the solution must be used in full strength and for some time before the operation.

Adrenalin has been vaunted as an excellent therapeutic agent in cases of conjunctivitis, but I must say that my experience does not bear this out, and I have long ago entirely abandoned it in these cases.

I have, however, found adrenalin a very valuable agent in dealing with cases of conjunctival hyperæmia, where there is no secretion, but where the patient complains greatly of a feeling of heat and roughness in the eye, caused, no doubt, by

the distension of the conjunctival vessels which, standing out prominently, cause a sensation as if sand were in the eye. For this condition, adrenalin solution dropped into the eye, and sponging or spraying the outside of the closed lids with cold water, gives the patient great relief, and often leads to the permanent cure of the patient.

I have also found adrenalin a most useful adjunct to other drugs, such as atropine, cocaine, eserine, &c., in cases where the inflamed condition of the eye and the hyperæmia of the vessels interfered very materially with the absorption of any drugs dropped into the conjunctival sac.

In inflammatory conditions of the eyes, and where there is injection of the conjunctival vessels, cocaine, holocaine, and other anæsthetics have only a very slight effect. If we attempt to do an iridectomy under such circumstances, we find that the iris has been practically unaffected by the anæsthetic. Under these circumstances, I have found that the adrenalin solution, by diminishing the intense hyperæmia, seems to allow of the better absorption of the anæsthetic; and if, for some time before the operation, we instil alternately the anæsthetic and the adrenalin solution, we may even in such cases perform an operation almost painlessly.

Similarly in iritis, where the atropine did not seem to be acting on the pupil and causing the required dilatation, the use of adrenalin solution has increased the absorptive power of the eye, and has enabled the atropine to take more powerful effect and produce the required dilatation.

Similarly in inflammatory glaucoma, when the eserine seemed to have no effect in contracting the pupil and reducing tension, the addition of adrenalin solution markedly increased the efficacy of the eserine.

The adrenalin, by reducing the hyperæmia of the vessels, brings the eye under more normal conditions, thus increasing its absorptive powers, and so rendering more active any drugs dropped into the conjunctival sac.

For a long period of years nitrate of silver has held an undisputed sway as the most precious topical agent which we possessed in the treatment of conjunctivitis in all its various forms, and especially in the severer forms, such as ophthalmia neonatorum and purulent conjunctivitis. As we now know, catarrhal and purulent conjunctival secretions are caused by the presence of micro-organisms, and the efficacy of the nitrate of silver was due to its powerful bactericidal action, which it owed to its base. The powerful caustic and corrosive action of the nitrate of silver was due to the nitric acid. Hence it

was evident that it would be a very great gain if we could get a salt of silver which would possess the same bactericidal properties as the nitrate, but be free from its irritating and corrosive properties.

The advance of chemical science has now put us in possession of organic combinations of silver which, whilst possessing all the bactericidal properties of the nitrate, are free from their corrosive and irritating effects.

Of these new silver salts, protargol and argyrol are the best, and have practically displaced nitrate of silver in ophthalmic practice. Both these new silver salts belong to the same class, but argyrol, the newer salt, is, in my opinion, much superior to protargol, and I have given both a good trial. The argyrol is said to contain 30 per cent of silver, while protargol only contains 8 per cent, and my clinical experience teaches me that the bactericidal properties of argyrol are even greater than those of protargol. Argyrol is less irritating than protargol or than any other silver salt. It produces no irritation or pain when applied locally in 10 per cent, 20 per cent, or even 30 per cent. I have, therefore, of late used argyrol in preference to all other silver salts, it being more effective and much less irritating.

Argyrol is a definite combination of silver with synthetic vitellin. It is a yellowish powder, easily soluble in cold water. The solutions of argyrol are very stable; they do not coagulate albumen or precipitate chlorides, hence they have no caustic action on the tissues. The powerful caustic action of nitrate of silver made it a very dangerous agent in diseases of the eye, unless when it was employed under skilled supervision. Its action on the corneal tissue was such that, when ulceration of the cornea occurred, it had to be used with the greatest caution, and care taken to neutralise it immediately after the applications to the conjunctiva. Argyrol, on the other hand, can be used with the greatest freedom, even in cases where the cornea is affected, having no action on the corneal tissue.

In ophthalmia neonatorum especially, I have found argyrol of the utmost service, and have now completely discarded nitrate of silver in the treatment of that disease. I use it in a 30 per cent solution, everting the lids and painting it on at least once daily. I prescribe, also, 10 per cent solution of argyrol to be used as drops, and this can be used very freely and frequently in severe cases. It is an enormous advantage to be able to allow the friends to use this powerful bactericide without any apprehension of its inflicting any damage to the

eye, even when the cornea is seriously affected. I have used the drops in severe cases every hour without any irritating effects to the eye, and with very striking results as to the rapid diminution of the purulent secretion. As the intensity of the inflammation subsides, and the discharge diminishes, the drops, of course, are to be used less frequently.

In ordinary catarrhal conjunctivitis, the use of the 10 per cent drops, three or four times daily after bathing with the usual perchloride or boracic lotion, will be found a great help in lessening the duration of the attacks.

In blepharitis, I have found argyrol of the greatest service. I use it in 30 per cent solution, and I rub it well into the edges of the lids with a brush. The argyrol applied in this way penetrates into the hair bulbs and roots of the eyelashes, and destroys the micro-organisms, which are generally the cause of this disease. The rapid improvement under this line of treatment also is often very striking.

Argyrol also is very useful in the treatment of diseases of the tear passages, especially in the cases of blenorrhœa of the lachrymal sac. I slit up the canaliculus freely into the sac, and wash out the sac daily with a solution of argyrol. I begin with a 10 per cent solution, then use 15 per cent, and, finally, 20 per cent. I prefer to leave the solution for some time in the sac. The argyrol solution remains active, and thus gets time to penetrate into all the folds and lacunæ, where lurk the micro-organisms which are keeping up the chronic inflammatory conditions of the mucous membrane of the sac. If it causes much irritation, I wash it out perhaps an hour or two afterwards with a boric acid solution, but in most cases I have not done so, allowing the argyrol solution to remain in the sac. This method of treatment is, in my experience, a very distinct advance in dealing with troublesome cases.

In 1898, at the meeting of the British Medical Association at Edinburgh, I made a communication on holocaine, a new ocular anæsthetic. Since then, I have been using it constantly, and find it for many purposes much superior to cocaine. Its good points are not sufficiently appreciated by the profession, and I will therefore give a brief summary of its advantages.

I use holocaine either in the form of a 1 per cent aqueous solution of holocaine hydrochloride, or in the form of an ointment made up with vaseline of the same strength. Holocaine is readily precipitated in presence of an alkali, and hence ordinary glass bottles must be de-alkalised by boiling them in a weak solution of hydrochloric acid for half an hour or an

hour, before the holocaine solution is put into them. If this be done, then the holocaine solution is perfectly stable, and will remain good for a considerable time.

The holocaine solution will be found to produce a more rapid and more lasting anæsthesia than that of cocaine, and without the disadvantages of cocaine. Holocaine has no effect on the eye apart from the anæsthesia. Cocaine produces dryness and exfoliation of the epithelium, with a transient dilatation of the pupil and paresis of accommodation. Holocaine has no effect on the cornea, the iris, or the ciliary muscle. It has one drawback for operative work—the dilatation of the vessels leading to a greater amount of hæmorrhage than cocaine, which contracts the vessels. The 10 per cent holocaine solution possesses powerful antiseptic properties, which Heinz says are so powerful that boiling the solution to sterilise it is quite unnecessary. It can be sterilised, however, by boiling without any decomposition. This is a very great advantage to the general practitioner who is only using an anæsthetic on rare occasions, perhaps mostly for removing foreign bodies from the eye. For this purpose, holocaine is an ideal anæsthetic for him. He can leave it a long time, and use it without fear of introducing any septic micro-organisms into the eye. A cocaine solution, on the other hand, which has been left a long time, should not be used for this purpose without previous sterilisation.

I have found holocaine also of very great service in the treatment of ulcers of the cornea. Ulcers are often accompanied by a great amount of pain, and, before holocaine, I used often to give cocaine for the purpose of relieving it; but, since the introduction of holocaine, I have preferred to use it. It is most effective in helping to relieve the patient's sufferings, and also, I am certain, is helpful in bringing the ulcer into a healthy condition, probably owing to its bactericidal properties. In such cases, I always prescribe it in the form of ointment, combined frequently with atropine. In cases of corneal ulcer, there is usually considerable tearing, and drops are practically useless, as they are at once diluted and washed away by the abundant flood of tears. Hence, in such cases, the only efficacious way of applying such drugs as atropine or holocaine is in the form of ointment, for which vaseline makes an excellent basis. If a piece of this ointment is inserted under the lids, it smears itself all over the globe of the eye, and becomes intimately applied to the whole extent of the cornea and conjunctiva. There can be no doubt of the enormous superiority of applying drugs in this way to the eye

when there is much lachrymation, and I would call your attention very specially to it.

In glaucoma also, holocaine will be found most useful in relieving pain. Cocaine, which dilates the pupil and raises the tension of the eye, should never be used for this purpose. In the *Ophthalmic Review* of 1898, I reported a case of acute glaucoma brought on by the use of cocaine. Holocaine can be used freely in all cases with elevation of tension, since it has no effect either on the pupil or on the tension of the globe. In glaucoma, in all its forms, holocaine is, therefore, the anæsthetic which should always be used.

In the deep-seated pain produced by severe inflammation, such as iritis, cyclitis, and irido-cyclitis, I have found the analgesic properties of holocaine very much greater than those of cocaine. In such cases, cocaine is very ineffective, and in some it seems actually to increase the pain, which it probably does by raising the tension of the eye. The relief given in such cases by holocaine will be found to be much greater and more lasting, and the drug can be used freely, as there is no danger of elevating the tension of the eye. In holocaine, we have an analgesic having a more profound and more lasting influence than that of cocaine, and hence of the greatest value for the relief of the deep-seated pain in cases of inflammatory affections of the eye.

Holocaine must not be used either for subconjunctival injection or for injection into the tear passages, as it is more poisonous than cocaine, resembling strychnine in its action.

Acain, an artificial product, has a distinct rôle as an ocular anæsthetic. A 10 per cent solution of acain dropped into a rabbit's eye renders it completely anæsthetic. Dropped into the human eye, it produces no effect, but, when injected under the conjunctiva, it seems to have a markedly analgesic effect, and this quality has been utilised in rendering subconjunctival injections practically painless. Of late, the subconjunctival method of injecting solutions in the treatment of diseases of the eye has come greatly into vogue, and one of the greatest objections to this method was the pain produced. Cocaine injected under the conjunctiva can give only a very slight relief to the pain experienced by subconjunctival injection, which often lasts for five or six hours afterwards. Holocaine is so poisonous a substance, it cannot be used for this purpose. Acain can be used with perfect safety. The best method of proceeding in these cases is as follows:—A few drops of 2 per cent cocaine solution is instilled into the conjunctival

sac, then 10 minims of a solution containing equal parts of 2 per cent cocaine and 1 per cent acoin is injected subconjunctivally. Five minutes thereafter, inject your solution, whatever it may be, subconjunctivally, and you will find there is little or no pain. Without the acoin, the patient would be suffering considerably for five or six hours after the injection.

The new mydriatic, euphthalmin, is a drug with which all should be familiar. At the meeting of the British Medical Association in 1899, I called attention to the properties of this new mydriatic, and have employed it constantly in my practice ever since. Euphthalmin is a new synthetic preparation, and is closely related to the new anæsthetic beta-eucaine. I have found a 5 per cent solution the strength best adapted to produce dilatation of the pupil rapidly and with a minimum of discomfort to the patient. I will give a brief summary of the results of my experience with euphthalmin.

1. Two or three drops of the 5 per cent solution of euphthalmin will dilate the pupil fully in from twenty to thirty minutes.

2. This dilatation may be considerably accelerated by the preliminary installation of 1 per cent solution of holocaine or 2 per cent solution of cocaine.

3. There is produced a paresis of accommodation, variable in amount, but always of a very transient character, passing off completely in from an hour and a half to two hours.

4. There is no discomfort or feeling of irritation produced by the installation of the drug.

5. No toxic symptoms have ever been observed from its use.

6. The mydriasis disappears completely in from eight to twelve hours.

It is thus evident that we have in euphthalmin a mydriatic which, for certain purposes, has very great advantages over all the others commonly in use. When we wish simply to dilate the pupil so as to get a better view of the interior of the eye, euphthalmin is the drug which should be used. Why put the patient to the great inconvenience of prolonged paralysis of the accommodation, when we have a mydriatic like euphthalmin, which will dilate the pupil without impairing the patient's vision for more than an hour or two at most? Of course, when we wish to paralyse the accommodation, as in the estimation of refractive errors, homatropine and atropine must be used, but where we wish simply to make an ophthalmoscopic examination of the fundus of the eye, then euphthalmin is the drug which should be used.

. MOVABLE DISPLACEMENTS OF THE KIDNEY.

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(Continued from p. 357.)

(b) The vessels of the kidney are generally elongated, even in the lesser degrees of movability, and, when the movements are free and the ailment one of old-standing, the lengthening of the renal artery and vein may be considerable—so great, indeed, that the kidney may be easily delivered through the incision in the parietes without much stretching of the pedicle. The radius of movement corresponds with the length of the vessels from the aorta to the hilum of the kidney, and when the organ is displaced, the oblique position is the one most frequently assumed—the lower pole of the kidney (4) pointing inwards, while the hilum and pelvis (3) present upwards (Fig IX, p. 419). Less commonly, the hilum is turned backwards and downwards, while the convex surface rests upon the anterior abdominal wall. The origin of the arteries from the aorta is normal unless the condition has been congenital. The changes just referred to may be observed both on the operating table and at *post-mortem* examinations. I have seen a case where the vessels were fully $4\frac{1}{2}$ inches in length in a case of movable right kidney. During life, the lax vena cava yields to the continuous tension made upon it by the renal vein, while the aorta remains more firmly fixed. This circumstance probably accounts for the fact that the artery is generally more elongated than the vein. It would be expected that this lengthening and stretching of the vessels would lead to thinning of their walls, but this is not seen, rather the opposite. Generally the walls, both of the artery and of the vein, are thickened. In movable kidney, the displacement of the organ may, firstly, cause the circulation to be interfered with by direct mechanical obstruction, by rotation of the loose kidney on its short axis, causing twisting of the vessels, and secondly, by displacement of the kidney downwards, stretching the vessels and causing acute angular curvature. As a consequence, either the arterial supply may be impaired or resistance may be offered to the venous return. I have shown

above, and illustrated by Case I, how rotation of the kidney may obstruct the escape of urine from the pelvis; and, in the paper read before the Clinical Society, London, in 1896 (Clinical Society's *Transactions*, vol. xxx, p. 65), I endeavour to show and illustrate by cases how in movable kidney, by increasing the vascular tension, renal pain, hæmaturia, and albuminuria may be induced. Since that time, a considerable number of cases have confirmed the views then expressed.

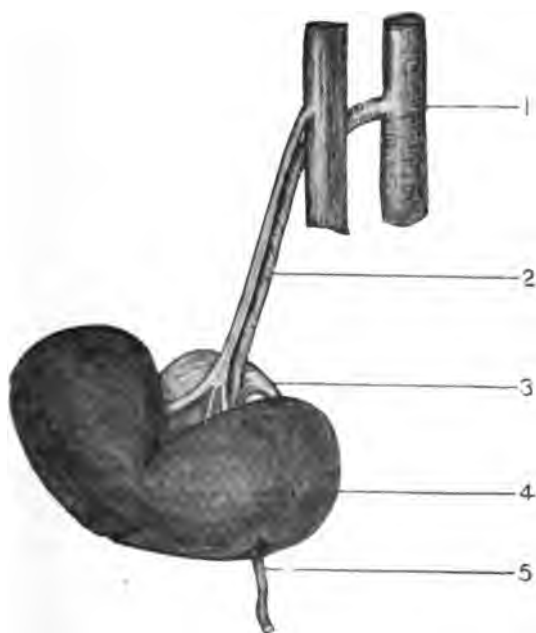


FIG. 1X.

1, The aorta ; 2, the renal vein ; 3, the pelvis ; 4, the lower pole of the right kidney ; 5, the ureter.

When the poles of the kidney are reversed by rotation on its short axis, not only is the ureter twisted and compressed over the vessels, but the artery and the vein may also be constricted.

Impediment to the *flow of blood through the artery is very rare*. The only case I have seen is one I recorded in the paper above referred to, and, on account of its unique character, it may be worthy of repetition.

CASE IV.—*History of injury causing movable kidney—Renal pain—Emaciation, and occasional suppression of urine from torsion of artery and ureter—No tube-casts, hæmaturia, or albuminuria—Cured by operation.*

N. O., æt. 49, came under observation in 1882. Prior to this the patient, who was at one time very stout, had been emaciating. He had suffered a good deal from chronic bronchial catarrh, attended with considerable muco-purulent expectoration which, on microscopical examination, was found occasionally to contain a few blood-corpuscles and a considerable quantity of pus. The physical signs were indicative of chronic bronchitis, accompanied by slight emphysema, without bronchiectasis.

The history of the case, as far as the movement of the kidney is concerned, dates from the beginning of the year 1882. He was out riding one day, when his horse stumbled, and he fell on his right side and fractured two of his ribs (the ninth and tenth left). He was kept in bed for a fortnight after the accident. During this time, he complained of pain on the right side, immediately below the edge of the liver. The practitioner attending him at that time suspected an abscess, and treated him accordingly. While he remained in bed, he did not notice any swelling or tumour on the right side, but after he got up he discovered a movable tumour seated in the hypochondriac region. At first he complained of pain in the right renal region, attended with vomiting, and sometimes followed by diarrhœa. The pain usually came on suddenly, and lasted for five or six hours. He noticed that if he took much exercise, or if the bowels were constipated, he was more apt to have an attack. When he took to bed the symptoms soon disappeared, but, on the other hand, if he continued to take even moderate exercise, the pain caused him considerable inconvenience.

He was greatly emaciated, and for a man the belly was loose and pendulous. Palpation of the abdomen revealed the presence of an oval swelling immediately under the lower edge of the liver, and about 2 inches from the umbilicus. The swelling could be freely moved about in the abdomen, and pushed down into the pelvis, upwards under the edge of the liver, and an inch to the left of the middle line. Percussion over the right renal region, or over the swelling, did not yield any satisfactory results, but when the right loin was examined, the kidney having previously been displaced, a distinct flattening could be made out. When the swelling was handled, a sickening sensation was experienced, resembling, as the

patient informed me, the pain produced when the testicle is squeezed.

A careful examination was made with the object of detecting pulsation of the kidney or of the renal artery, as this case appeared to be a very favourable one for this purpose, on account of the thinness and looseness of the abdominal wall, but no trace of movements resembling pulsation could be made out.

The only other symptom worthy of notice was the occasional sudden suppression of urine, without any very evident cause, and without any apparent relation to the position of the right kidney. Sometimes it commenced without the organ being displaced, at least so far as could be detected by hand, and there was no increase in the size of the organ during the time this symptom was present.

The only explanation I can give for the scanty secretion of urine, is to suppose that the kidney was rotated on its short axis, so that the ureter and blood-vessels were coiled round one another, and the passage of blood to and from the kidney was thereby prevented. This condition would lead to a very marked engorgement of the kidney on the affected side, while it might also induce reflex spasm of the blood-vessels in the opposite organ, and so bring on suppression, just as the use of a catheter may cause the excretion to cease for a time.

When the secretion again became active, the urine passed did not differ from what was voided at other times.

The following table will show the quantities and specific gravities of seven samples collected during one of the attacks. There was no urine passed between 11 A.M. on 28th and 1 A.M. on 29th November.

1882.	Quantity.	Sp. Gr.	Urea.	Remarks.
Nov. 28— 7 A.M.	10 oz.	1015	1.75 %	Slight deposit of urates.
„ 28—11 „	8 „	1017	1.85 %	„ „
„ 29— 1 „	3 „	1016	1.7 %	Considerable deposit of urates.
„ 29— 3 „	10 „	1019	1.9 %	„ „
„ 29— 8 „	6 „	1014	1.5 %	No deposit. „ „
„ 29— 1 P.M.	7½ „	1014	1.55 %	„
„ 29— 5 „	10 „	1018	1.7 %	„

At the time, the case was considered to be one of movable kidney, with torsion of the renal artery, without much obstruction to the venous return, as shown by the sudden suppression of urine, unassociated with hæmaturia, albuminuria, or the presence of tube-casts.

The patient refused to have an operation performed, and, at the time (1882), I was too uncertain in my views of the case to press the matter; but, the symptoms remaining unabated till 1888, I then performed nephrorrhaphy with a good result.

Interference with the *venous return is one with which we are very familiar*, and in movable kidney is probably the most frequent cause of pain associated with hæmaturia. This correlation has been observed in over 12 per cent of my cases, and in 7 per cent the hæmaturia has been noted as severe. It is not necessary here to dwell upon the symptoms and physical signs to which obstruction to the venous flow may give rise; that will be dealt with farther on.

The pathology of these cases is easily understood. It is manifest that in such displacements of the kidney we have to deal with a passive hyperæmia of the kidney due to local causes. In some instances the obstruction may be entirely venous; in others, the arterial circulation may also be interfered with. It has been proved by experiments upon animals that when the venous flow is impeded the quantity of blood flowing through the kidney is diminished, and, as a consequence, the amount of urine excreted immediately decreases. Coincident with the diminution in quantity of the excretion there is a concentration of the urine, which soon becomes albuminous; and, should the hyperæmia be intense, blood-corpuscles, tube-casts, and even blood-casts may appear in the urine.

As the efferent resistance increases, the veins and the venous radicles surrounding the uriniferous tubules will become distended. This increased resistance to the flow of blood will lead to an augmentation of the blood-pressure within the glomeruli; but, at the same time, by diminishing the total quantity of blood flowing through the organ, the venous obstruction will cause retardation to the excretion of urine.

The absolute pressure of the blood in the glomeruli is only one factor in determining the quantity of urine excreted; the rapidity of the flow is of even greater importance, and the kidney being provided with a rigid capsule, the engorgement of the veins must produce considerable pressure upon the uriniferous tubules, and so augment the pressure of the fluid in Bowman's capsules. This compensates to some extent for the increased tension of the blood in the Malpighian tufts.

The backward fluid-pressure of the urine so produced doubtless induces an œdema of the organ, and probably a partial absorption of the already secreted urine, as indicated

by an engorgement of the lymphatic spaces; but, when the obstruction to the vein is removed, the venous radicles empty themselves quickly, and the œdema rapidly disappears. This happens only when the engorgement is of short duration; when it is prolonged or frequently repeated, serious structural changes will ensue.

As regards the passage of albumen and the corpuscular elements of the blood, long ago Mr. George Robinson, in a paper read before the Royal Medical and Chirurgical Society of London in 1843, demonstrated by experiments upon animals that obstruction to the renal vein caused both albuminuria and hæmaturia, and these abnormal constituents appeared in the urine within a very short time after the obstruction took place—in some instances within three or four minutes. Senator, also, by experiments, proved that, by obstructing the renal vein for a short time in a living animal, albumen and blood-corpuscles could be easily detected in the straight tubules, while Bowman's capsules were free; but, if the pressure were more prolonged, the mechanical hyperæmia caused blood to escape into the Malpighian capsules also.

From these experiments, it is easily seen how blood-casts, blood-corpuscles, and albumen may appear in the urine in the cases described above, and, from other observations it has been shown that the slower the circulation becomes the larger will be the amount of abnormal constituents in the urine. Not only does venous obstruction produce those changes in the urine, but compression of the renal artery may also be followed by suppression of the excretion. Hermann and Overbeck demonstrated that even slight disturbance of the renal circulation causes suppression, which may last for a longer or shorter period according to the sensitiveness of the individual, and that albumen and blood may appear in the urine for hours or days thereafter. We also know that arterial obstruction is an important cause of venous hyperæmia; and, with the possibility of having venous pressure combined with arterial disturbance of the circulation, we have in movable kidney a most productive cause of suppression of urine followed by hæmaturia and albuminuria.

I believe that not only in the cases referred to here, but in many others, the retardation of the glomerular circulation by venous engorgement is the chief factor in the causation of suppression of urine and some forms of albuminuria, and, consequently, relief of tension may give immediate ease to the patient, and restore the function of the kidneys.

The clinical phenomena can be easily understood when they

come to be considered. The impediment to the circulation at once induces swelling of the substance and painful tension of the capsule; this induces degenerative changes in the parenchyma, and, if prolonged or frequently repeated, atrophy of the kidney follows. Fortunately, the kidney in the large majority of cases soon resumes its function. The pain compels the patient to go to bed, and while lying the kidney slips back to its normal position, and the strangulation is for the meantime relieved.

I will describe one or two illustrative cases when we come to consider the question of symptoms.

In 8 out of 180 cases which have come under my observation, albumen and tube-casts were present in the urine prior to the operation, and disappeared within a fortnight thereafter. In all these cases the fibrous capsule was freely incised, but not separated from the cortex. The fact that albumen and tube-casts were persistently present in the urine suggested the existence of Bright's disease, but the circumstance that these elements vanished after the operation led me to the conclusion that their presence was due to mechanical interference with the circulation. How far this view is correct it is difficult to say. The explanation may be wrong, but the fact remains. I have seen undoubted cases of Bright's disease mitigated by operation, but even in these cases I have been convinced that the relief was due to relaxation of the vascular tension coincident with the malady.

Bright's disease is relatively more common in cases of movable kidney than in patients with their kidneys in place. As far as I can gather from published cases, and from my own observation, a little over 6 per cent of the cases of movable kidney present symptoms of Bright's disease, and, in the great majority of these, the movability has been of old-standing.

(c) *Nerves*.—The displacements which cause so much deformity of the vessels and ureter cannot fail to displace and strain the renal nerves, and this probably accounts for much of the discomfort generally experienced by the patient; but, on account of the small size of the filaments involved, it is difficult to ascertain the exact pathological changes. Patients seldom die from movable kidney, or from the operations which are performed for its relief. My first case operated upon on 29th March, 1883, is still alive and well, and I have not had a death from nephrorrhaphy in an uncomplicated case of movable kidney—that is to say, a case that was free

from sepsis, tuberculosis, or cystic disease. I have no doubt, as a consequence of rapid displacements of the kidney, certain inflammatory degenerative changes do occur in the nerves, and these, even after the kidney has been fixed by operation, may take a considerable time to return to their normal state; hence renal pain may persist even after the patient is convalescent from the operation and relieved of other symptoms. The following case seems to me to illustrate this well:—

CASE V.—Movable right kidney with pain as a prominent symptom, which was not completely relieved till six months after nephrorrhaphy, probably as a consequence of degenerative changes in the renal nerves.

Mrs. W., æt. 37, came under my observation in September, 1901, and presented all the usual symptoms of movable kidney, but none of those pointing to obstruction to the ureter or to interference with circulation. At the beginning of October I performed nephrorrhaphy at her own home. Prior to the operation pain was a prominent symptom for many months, and frequent attacks of dyspepsia made the patient's life miserable.

The right kidney was freely movable, and could be found as low down as the anterior superior spinous process on several occasions. While relieved of symptoms of gastrointestinal disturbance and those referable to the urinary system immediately after the operation, four months subsequent to it the patient was conscious of what she described as "the old pains in the kidney," even although the kidney was firmly fixed, and no other symptoms of renal disturbance were present. Her suffering included crampy pains in the abdomen, dull aching pains in the loins, and pains along the great nerve trunks of the right leg. Two months later—that is to say, six months after the operation—these all disappeared without further treatment having been employed. Their disappearance was very gradual, but quite steady.

V. Changes in the parenchyma of the kidney and the fibrous capsule.—As a rule, the parenchyma of the kidney suffers little or no change in the early stages of this disorder, but if the malady is of some years' standing, various morbid conditions may be induced.

1. Those due to interference with the circulation.
2. Those following transitory hydronephrosis.
3. Secondary diseases, such as the various forms of sepsis, tuberculosis, cystic disease, and renal calculus.

The first morbid process produced by the passive hyperæmia and increased vascular tension, associated with movable kidney, is degenerative changes in the epithelium, and while the organ may be considerably increased in size for a variable length of time, the ultimate tendency is to atrophy. In the great majority of very old-standing cases I have found that the affected kidney is less than half the normal size, but probably this was physiologically redeemed by compensatory hypertrophy of the neighbouring organ. A case was admitted to my wards in the Royal Infirmary a few days ago (9th April), sent by Dr. Reid, of Mauchline, where at the operation the kidney was found to be greatly atrophied. It was about 2 inches in length, and measured not more than half an inch from the pelvis to the convex margin. The urinary secretion was quite normal, showing that the atrophy was compensated for. If, prior to the operation, the patient has been allowed to have rest in bed for a week or two, very frequently in performing nephrorrhaphy the kidney is seen to be soft and flabby and darker in colour than normal; but if the operation is performed without prolonged rest, it is found to be congested, of a dark chocolate colour, and when the fibrous capsule is incised the parenchyma pouts out through the opening.

The changes in the kidney substance secondary to transitory hydronephrosis are very similar to those induced by impairment of the circulation. When the ureter is suddenly and completely obliterated, a wasting of the parenchyma rapidly follows, and very little dilatation of the pelvis results. In incomplete occasional obstruction, hydronephrosis is induced for a limited time, and during the intervals the organ has an opportunity of recovering itself; but if the attacks are frequent, or of long duration, wasting of the organ is certain to follow.

The pressure exerted by the urine, which accumulates behind the obstruction, leads to expansion of the calices and flattening of the papillæ. Gradually, as the hydronephrosis advances, the pyramidal portion becomes excavated, until, as seen in extreme cases, the whole organ is represented by a cyst, or by a series of cysts, separated from one another by septa of fibrous tissue. As the pelvic cavity and the capsule approach one another, the renal form of the organ is lost. The outer surface may become rough, irregular, and lobulated, the depressions between the lobules corresponding to the connective tissue septa within the sac, which indicates the remnants of the calices of the kidney. These pouches communicate freely with one another, and, in most instances, with

the dilated pelvis, but in a few rare cases the sacs may be shut off from the pelvis by fibrous tissue. In movable kidney this extreme degree of hydronephrosis is very rare. The most marked instance I have seen was Case III (p. 355).

Secondary diseases, such as the various forms of sepsis, tuberculosis, cystic disease, and renal calculus, are not very uncommon in malpositions of the kidney. When the patient presents herself to the surgeon, and he finds on enquiry that she has been suffering for many years, and on examination discovers that the kidney is both movable and diseased, it is often difficult to determine whether the disease is the cause of the movability, or that the movability of the kidney is the cause of the disease. As far as I can learn from a study of the subject, and from what I have seen, all forms of misplacement, whether fixed or movable, lay the kidney open to attack. This has an important bearing upon the question of operative treatment; not only have we to bear in mind the present, but we have to look forward to the future prospects of the patient. In an article which was published in the *Glasgow Hospital Reports* on "Malformations of the Kidney,"¹ I pointed out how liable misplaced kidney, but especially "single kidney," is to disease. I collected seven cases of "single kidney" in which calculus was present; these were published by Rhodius,² Jobi,³ Rokitansky,⁴ Rayer,⁵ C. Julia Fontenelle,⁶ Everard Home,⁷ Sylvaticus.⁸

Chronic tuberculous and interstitial nephritis is also very common in "single kidney," and a few cases of hydronephrosis have been recorded, and one or two of pyonephrosis and abscess. Considering the great rarity of "single kidney," that is a goodly number.

Any condition which impairs the nutrition of the organ must diminish its resisting power to invasion by infective processes. A kidney which is constantly liable to disturbance of its vascular supply, as occurs in the crises of movable kidney, or to retention of its secretion, as in transitory hydronephrosis, becomes favourable to attack by micro-

¹ *Glasgow Hospital Reports*, vol. i, p. 142.

² *Mantissa Anatomica, Observatio*, xxxii, 1661, p. 21.

³ à Meek'ren, *Observationes Medico-Chirurgicæ*, Amstelodami, 1682, cap. xl, p. 169.

⁴ *Lehrb. der Pathologischen Anatomie*, Bd. iii, 1861, S. 317.

⁵ *Traité des Maladies des Reins*, tome i, 1839, p. 404.

⁶ *Archives Générales de Médecine*, tome ii, 1824, p. 517.

⁷ *Practical Observations on the Treatment of the Diseases of the Prostate Gland*, London, 1811, vol. i, p. 68.

⁸ Cited by Lieutand, *Historia Anat. Med.*, tome i, p. 284.

organisms, either septic or tuberculous. The factors which facilitate invasion of microbes to the kidney and the urinary tract are numerous. These were fully discussed by me in an article on septic diseases of the urinary tract published in the *Glasgow Hospital Reports*.¹ Pent up organic fluid is liable to infection in many ways, and so a hydronephrosis may easily be converted into a pyonephrosis, a septic nephritis, or a pyelonephritis. This, however, is too large a question, and is beyond the limits of the present enquiry.

Conservative action may intervene. As a consequence of inflammatory changes around the kidney, the movable organ may become spontaneously fixed in an abnormal position. Urag mentions instances in which the kidney became bound to the surface of the liver, the gall-bladder, and the transverse colon; and other observers have recorded cases where the wandering organ became ultimately fixed to the stomach or to the anterior abdominal wall. I have seen two cases where spontaneous cure occurred after mild attacks of perinephritis. The first case (in 1898) was that of a lady who had a movable kidney for many years, but suffered very little as a consequence. She was accustomed to take active exercise—cycling, hunting, and tennis. One day, while on the hunting field, she was thrown from her horse, and fell upon her right side, sustaining an injury to the right arm and severe bruising on the right side of the abdomen and chest. Three days after the injury she complained of great pain in the region of the right kidney. Considerable induration ensued, and there was tenderness over the part for fully three weeks, and probably considerable effusion of blood in the deeper structures of the lumbar region. She made an excellent recovery, and when I examined her six months afterwards, the kidney was firmly fixed between the costal margin and the crest of the ileum, probably an inch and an half below its normal position. The second case (in 1901) was almost exactly similar—it was that of a housewife, the wife of a working engineer. She had a movable left kidney which caused her trouble only occasionally, and, although advised to have a nephrorrhaphy performed, she preferred to do without the operation, saying that her kidney, although away from its place, did not give her much trouble. While at work in her house the chair upon which she was standing upset, and she fell against the edge of the concealed bed. Very soon after the injury she suffered considerable pain, and there was marked collapse, indicating some serious injury, but the precise nature of this was difficult to ascertain.

¹ *Glasgow Hospital Reports*, vol. iii, p. 354.

There was severe contusion in the left lumbar region, and may have been over a rupture of the kidney, but this was not corroborated by the presence of blood in the urine, although there was evidence of considerable hæmorrhagic effusion deep in the lumbar region. I saw the patient at occasional intervals for a year after the accident, and when the swelling disappeared I was unable to discover any mobility in the kidney, which had been freely movable prior to the accident. Those two cases illustrate how a spontaneous cure may occur as a consequence of accident, but one can also easily understand how the organ may be fixed by any inflammatory affection of the structures around the kidney. In fact, in operating we only imitate what may, under certain circumstances, be done by Nature.

VI. The changes in other abdominal organs are numerous and interesting, but it is not necessary to dwell at length upon them here. They will demand our attention when the question of etiology comes to be considered. Glénard regards movable kidney as simply one of the numerous instances of enteroptosis, and expresses the opinion that nephroptosis never exists alone; and he points out the frequency with which in the same person the liver, the intestine, and the kidneys are unduly lax and movable. Ewald, on the other hand, controverts this view, and Morris agrees with him. "The conclusion of Ewald is the one which will most commend itself to surgeons who see much of kidney surgery and 'movable' or 'floating' kidneys. My own personal experience is that the persons who consult a surgeon on account of a wandering or a movable kidney, are as a rule free from undue mobility or ptosis of any other abdominal organ. I have only once been consulted, with the view to the question of the treatment of a mobile kidney, where the patient was considered to be the subject of enteroptosis. This patient was sent to me by a physician as a case of Glénard's disease. She was a woman with very lax abdominal wall, a very movable kidney, and a somewhat movable liver. She was quite relieved from all her symptoms, both renal and intestinal, by nephropexy, and remained well for several years after the operation."¹

The strong objection to the view Glénard advanced is that in the great majority of cases of movable kidney seen by the surgeon, the other abdominal organs are not disturbed; and, on the other hand, there may be serious reduction in the internal abdominal pressure, and some displacement of viscera

¹ Morris, *Surgical Diseases of the Kidney and Ureter*, vol. i, p. 101.

without any undue movability of the kidney. In right movable kidney Girard observed changes in the vena cava; the vessel showed a distinct furrow at the spot where the kidney lay.

Stone in the bladder, gall-stone, and the other affections of the gall-bladder have been noted by Marchard and Weisker. Probably the most important changes are in the alimentary tract. In many instances the stomach is dilated and there is evidence of pyloric obstruction. The duodenum may also be affected. Hellar found it greatly enlarged in the pars perpendicularis. David Hepburn met with a case where the pars perpendicularis duodeni ran to the left.

"From the pylorus the duodenum passed to the right for a distance of 2 inches, when it came in contact with the left side of the gall-bladder and the upper or left border of the kidney.

"It immediately turned downwards and to the left and crossed the mesial line obliquely, appearing in the left iliac fossa close to the sacral promontory. . . . From the left iliac fossa the duodenum turned abruptly upwards for a distance of 2 inches in the vertical direction; here it again made a sudden turn, this time to the right and then became continuous with the jejunum. . . .

"Another interesting feature in the case under consideration is the direction of the commencement of the jejunum, which was to the right instead of the left, as in normal cases."

(*To be continued.*)

NOTES OF A CASE IN WHICH THERE WERE ATTACKS OF ACUTE PULMONARY ŒDEMA.

By MARY BAIRD HANNAY, M.B.,
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THE patient about whom the following notes are written had several attacks of acute pulmonary œdema resembling those described by Dr. J. Lindsay Steven in the *Lancet* (11th Jan., 1902) as "acute suffocative pulmonary œdema." He was also one of the subjects (W. M'L.) of a paper entitled "Folie à deux," published by Dr. Marr in the *Edinburgh Medical Journal* (June, 1898). The clinical history, as obtained from the asylum case-books, is as follows:—

W. M'L., aged 48 years, light porter, was admitted in August, 1897—along with his wife, who is also insane—after having been for nearly nine months in Woodilee Asylum. Mentally he was somewhat demented, and had delusions of persecution. He was small, very much deformed by rickets, and had heart disease (increase in the area of cardiac dulness, and the presence of a mitral V.S. and of aortic V.S. and V.D. murmurs are noted by Dr. Marr). After admission he had, on one occasion, an attack of lumbago, and on several occasions was confined to bed with slight bronchitis. In January, 1902, he had an attack of acute pulmonary œdema, putting up in the course of twelve hours more than 2 pints of red-stained thin expectoration.

September, 1902.—Since last note he has had several slight attacks of acute pulmonary œdema.

January, 1903.—Infarction of the lung is suspected.

4th June.—About two and a half months ago he had a severe attack of dyspnoea, lasting for about twelve hours. He is now going about.

1st October.—Health is very indifferent. There is dulness at the left base, deficiency of respiratory murmur, wheezing and fine crepitant râle, and dyspnoea.

30th October.—In spite of rest in bed and medicine, he has gone from bad to worse. He is sleeping very badly, and breathing is at all times laboured and distressing. There is dulness at both bases, and coarse and fine moist râles are heard all over both lungs. The pulse is rapid—120 in a minute—and irregular in force and rhythm. The condition of the heart is not ascertained, owing to the irregularity of its action and to the noises associated with respiration. The legs are œdematous, and there seems to be a considerable amount of fluid in the peritoneal cavity.

He gradually sank, and died on 11th November, 1903. On the ninth and sixth days before death the urine contained albumen in large quantity, and there was a deposit of pink urates.

Post-mortem examination.—The autopsy is made fifty-one hours after death. The age of the patient at death was 54 years. The body measures 1·51 m. (5 ft.) in length; the only available record of weight—55 kilogrammes (8 st. 9 lb.)—is nearly two years old.

External appearances.—The physique is very poor, the lower limbs being very short and curved. Both femora are curved—convexity outwards—the right one acutely so. The tibiae are also curved—convexity inwards—the right more so

than the left, and they are also somewhat curved antero-posteriorly—convexity backwards. Nutrition is very good. *Post-mortem* lividity is present, and is very marked on the face, neck, upper part of chest, and upper arms. *Post-mortem* rigidity is present, and there is *post-mortem* discoloration in each iliac region, most marked in the right. There are no bruises, bedsores, or signs of injury. There is considerable œdema over the whole body, and froth is present at the nostrils. The axillary glands are palpable. There is no external evidence of syphilis. The ears, eyes, and palate are all natural. The teeth are rather irregular, but are fairly good. There is no grey hair, but the top of the head is bald. The hair of the head is very thin, and there is very little hair on the pubes, and none visible in the axillæ.

Head.—The scalp is of normal thickness, and strips readily. The skull-cap is symmetrical; its thickness is increased posteriorly (9 mm.), and diminished laterally (2-3 mm.) and anteriorly (3-4 mm.); its density and vascularity are natural. The dura mater is slightly thickened, and shows marked morbid adhesion to the skull-cap, but is otherwise natural. There is slight excess of fluid in the subdural space. The pia arachnoid shows slight opacity, considerable thickening, no adhesions, slight excess of fluid, and some congestion; it strips readily, and in larger pieces than is natural. There are a good many small atheromatous nodules on the vessels at the base; these are most numerous on the posterior cerebral arteries. The sinuses are empty and natural. The brain is of good size; the hemispheres are symmetrical, and the general arrangement of sulci and gyri is natural. There is slight wasting in the frontal, central, and superior parietal regions, most marked in the frontal region anteriorly. The left ascending parietal gyrus is, comparatively, very thin. The cortex is rather narrow; its striation is well seen. The white matter is wet in both hemispheres, but is otherwise natural. The lateral ventricles are not appreciably dilated; the ependyma is not granular, and the choroid plexus is natural. The pituitary body and pineal gland are both natural, as are also the basal ganglia, the corpus callosum, the cerebellum, pons, medulla, and cranial nerves. There is fine granularity in the lateral sacs of the fourth ventricle.

The *spinal cord* is not examined.

Neck and thorax.—The thyroid gland, larynx, trachea, tongue, and œsophagus are all natural. The pharynx is congested. The ribs are soft. The cartilages are natural, except those of the first ribs, which are ossified.

The *lungs* are adherent all over to the chest wall, and are removed with difficulty. The following description applies to both of them:—The pleura is about 1 mm. in thickness; the lung is very heavy and floats slightly under water, and the lobes are adherent to one another by dense fibrous tissue, which forms a band measuring about 1 mm. in thickness. On section of the organ, brownish, ill-smelling, slightly frothy, watery fluid flows from the bronchi. The lung does not crepitate, and is incompressible, being exceedingly dense and solid; it cannot be broken by pressure of the finger, nor does this cause exudation of fluid from the alveoli. There is no evidence of infarction. The bronchial mucous membrane is thinner than usual.

The pericardium contains about 5 ounces of clear fluid. The *heart* is large, owing principally to dilatation and hypertrophy of the right ventricle, the wall of which is fully 5 mm. thick; dilatation is much the more marked feature, however. The right auricle is also dilated and hypertrophied, and several small brittle thrombi are found among the muscoli pectinati. The left ventricle is hypertrophied, its wall measuring fully 1.5 cm. in thickness; but dilatation is not apparent. The heart muscle is firm and of good colour. The valves of the right side are quite natural; those of the left side are both diseased. The aortic curtains are much thickened, and the adjacent halves of the anterior and left posterior flaps are adherent to one another, greatly thickened, and infiltrated with lime. The mitral valve is stenosed, the orifice having a diameter of only 5 mm.; the segments are greatly thickened, and the fibrosis extends to the muscoli papillares. There are several patches of atheroma in each coronary artery. The thoracic aorta shows numerous raised yellow patches of atheroma; the great vessels are less affected. There is some enlargement of the cervical and bronchial lymphatic glands.

Abdomen.—There is about half an inch of fat in the anterior abdominal wall, and a good deal of fluid in the peritoneal cavity. The liver is exceedingly dense, and shows nutmeg patches; its capsule is very thick in the neighbourhood of the gall-bladder, which has thickened walls and contains 14 stones. The spleen is very large and very fibrous; its surface is scarred and puckered in places, and there is a large recent (white) infarction and several smaller old ones. The kidneys are small and congested; the capsules are slightly adherent, but are thin; the cortex of each is natural, and the consistence soft. The ureters and adrenals are natural. The

pancreas is large and very fibrous. The mesentery contains fat; its glands are not enlarged. The stomach and intestines are perfectly healthy in appearance except for some œdema. The abdominal aorta is very atheromatous; there are raised yellow patches and also patches of pearly white fibrosis. The pelvic organs are natural.

Weights of organs, in grammes:—Brain, 1,212; right hemisphere, 513; left hemisphere, 523; left hemisphere, stripped, 503; cerebellum, pons, and medulla, 164; heart, 542; right lung, 1,054; left lung, 1,152; liver, 1,210; spleen, 353; pancreas, 165; kidneys—right, 107; left, 115; adrenals, 17; testes, 52.

Microscopical Notes:—Heart.—There is no fatty degeneration of the muscle fibres of either ventricle, but pigment granules are present in the fibres of the left ventricle. The fibres of the right ventricle are as large as those of the left, the latter being also hypertrophied.

Lung.—The walls of the alveoli are very thick—twice, and in some places even four times, the normal thickness, and fibrous. The capillaries are dilated and thickened, but contain only a few leucocytes. There is a deposit of dark pigment in places. The alveoli contain a large number of free cells, most of which are epithelial and contain pigment.

Kidney.—The capsule is slightly thickened; the pyramids are very congested; the tubular cells are in a condition of cloudy swelling; there is no evidence of inflammatory exudation into the tubules, and no general interstitial change; a single patch of fibrosis is seen, and several hyaline nodules (glomeruli).

Spleen.—The capsule and trabeculæ are thickened, and the organ is congested.

Liver.—There is considerable fibrosis and evidence of long-continued passive hyperæmia; the cells in the central part of the lobules are much atrophied and pigmented, and are few in number; those at the periphery are swollen and vacuolated.

Note.—The patient was seen by the writer in his first attack of acute pulmonary œdema, which came on suddenly when he was in his usual health. He was sitting up in bed with a basin in his lap, into which he expectorated, almost continuously, thin, pink-coloured, frothy fluid. So abundant was the sputum that stimulants could be administered by the mouth only with difficulty, and in very small quantities. The skin was livid, the extremities cold, and dyspnœa and the appearance of anxiety extreme.

CORRESPONDENCE.

CONTRACT PRACTICE.

To the Editors of the "Glasgow Medical Journal."

DEAR SIRS,—As I had not an opportunity of contributing my quota to the discussion on contract practice at the Faculty Hall meeting last Wednesday, I trust you will afford me space to express myself through the *Journal*.

I recognise that friendly societies have come to stay—that it is a system we must reckon with; but that, although at present there seem to be many evils in the system, it surely should not be past the wit of man to find a remedy for them. I think, however, that a satisfactory solution will only be arrived at by friendly and reasonable conference between the contending parties—namely, the medical profession on the one hand and the friendly society members on the other. I meant, therefore, at the meeting the other day, to move a resolution to the effect that a committee consisting of friendly society medical officers and of other practitioners who held no such appointments be formed for the purpose of conferring with the leading officials of the several societies concerned. A joint committee such as this would discuss quietly and deliberately the evils which have gradually crept into the system, and almost certainly some good results would attend a report which such a committee would give us. I have a scheme in my own mind which, I think, would meet some of the difficulties we know exist at the present time. It is something like the following:—

First, I would have established a permanent board of management, composed of representative medical men and recognised society officials, in equal proportions.

Secondly, I would give this board the duty of appointing the medical officers yearly from a list of applicants sent in in response to an advertisement. The remuneration would be a fixed one for all the appointments, and that not much larger, if any, than at present. I firmly believe that the medical men who ought to hold these offices should be the juniors of the profession, and that these appointments should

be considered by them an introduction or stepping-stone to private practice. Further, with the same end in view, I would limit the number of years a practitioner would hold these appointments, in the same district, probably to five or ten years. The societies would possibly at first object to this arrangement, and would probably wish to offer better financial inducements for the purpose of attracting men of more experience. But I would answer that by reminding them that they are after all provident institutions, and reckoned as such by the medical profession at large. Medical men accept these appointments under the impression that they are helping the working man of limited means; but, so soon as the remuneration is raised to a sum which the societies would consider a fair *quid pro quo* for the medical services rendered, they would at once bring their officers into conflict with the practitioners who either never had secured any of their appointments or who had passed through the tenure of them, but who would rightly and naturally now feel that the societies were entering into an unfair competition with them in their moderate fees.

Lastly, I would throw another duty on this board of management—namely, to make an annual scrutiny, made up from returns from the different lodges, of the financial status or social condition of *every* member; and as soon as a limit (to be agreed upon) was reached, these members would be deprived of, at least, *medical* benefit—would, in fact, pass from the class of ordinary to that of honorary members. But they surely would not grudge to continue their subscription, and so in their prosperity help their less fortunate brethren.

A scheme such as I have thus attempted to outline may, no doubt, appear to be very defective and crude to men more conversant than I am with the inner working of those societies, but I venture to submit it in the hope that more experienced minds may find in it some help to the solution of this difficult question.—Faithfully yours,

JAMES HAMILTON.

1 ROYAL CRESCENT, CROSSHILL,
GLASGOW, 14th May, 1904.

CURRENT TOPICS.

CONTRACT MEDICAL PRACTICE.—A meeting was held in the Faculty Hall on 11th May, to consider the question of contract medical practice. Dr. John C. M'Vail occupied the chair. The meeting was attended by representatives of the Glasgow Divisions of the British Medical Association, and of several of the Glasgow medical societies, but was open to all members of the medical profession. There was a large attendance, and the discussion was at times of a very animated character. The following five resolutions were proposed and adopted—the third and fifth unanimously, and the others by a majority of those present:—

1. "That the rate of remuneration of Medical Officers of Friendly Societies is too small, and that the Friendly Societies be approached in the matter, with a view to having the sum increased to four shillings per member per annum."

2. "That individual members of Friendly Societies be entitled to choose the medical man they desire to attend them."

3. "That any rule which enjoins that Medical Officers of Friendly Societies shall visit sick members under the care of private practitioners is unfair, and should be abolished."

4. "That a wage limit for members of Friendly Societies receiving medical benefit should be fixed."

5. "That it be relegated to the existing committee to take the necessary steps to bring under the notice of Friendly Societies the resolutions carried."

BRITISH MEDICAL ASSOCIATION: GLASGOW AND WEST OF SCOTLAND BRANCH.—The annual meeting of this Branch was held in the Royal Infirmary on 20th May. After tea in the Residents' dining-room, the statutory business meeting was held in the Board Room at 3 o'clock, when Dr. John C. M'Vail took office as President of the Branch in room of Dr. Ebenezer Duncan, the retiring President. The following nominations made by the Council were intimated, viz., *President-Elect*, Dr. John Macintyre; *Honorary Secretaries*, Dr. James H. Nicoll and Dr. James Hamilton. When the work indicated on the programme had been completed, a short address was delivered by Mr. Andrew Clark, F.R.C.S., Chairman of the Council of the British Medical Association.

At 4 o'clock a demonstration was given by Dr. John Macintyre, on recent electro-therapeutic methods of treatment. After this the meeting, which was a very large one, had an opportunity of inspecting the electrical pavilion of the infirmary, and examining patients.

The annual dinner took place at 6.45 in St. Enoch Station Hotel, and was well attended. Dr. John M'Vail, President of the Branch, occupied the chair, and Mr. Andrew Clark was one of the guests. The after-dinner programme consisted almost entirely of speeches, and, as a number of the members had to leave town that night by train, the proceedings were brought to an end at a comparatively early hour.

THE OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—This Society met in Glasgow on 21st May in the Faculty Hall, 242 St. Vincent Street. There was a large attendance of members, and Dr. Barr, President of the Society, occupied the chair. Interesting demonstrations were given by Professor Cleland and by Dr. Colquhoun for Professor M'Kendrick.

Notes were given by Dr. M'Bride (Edinburgh) on a case of otitic cerebral abscess with obliteration of the mastoid antrum, diagnosed during the operation and verified at the autopsy. Mr. R. H. Parry (Glasgow) read notes of a case of tinnitus aurium treated by division of the eighth nerve. Mr. R. Lake (London) gave the report of a case where all the semicircular canals on one side were removed for the cure of vertigo. The operation was successful, and the patient has resumed work. Dr. J. H. Nicoll (Glasgow) pointed out the indications for operative interference with the lateral sinus and internal jugular vein, and showed a series of illustrative cases. Papers were submitted by Dr. A. Brown Kelly, Dr. Jas. Galbraith Connal, and Mr. Macleod Yearsley. A series of cases of ear and brain disease (post-operative) were shown. An interesting one historically—shown by the President—was the first case of temporo-sphenoidal abscess operated on in Glasgow seventeen years ago by Sir William Macewen.

In the evening the President entertained the members of the Society to dinner in the Grand Hotel.

SCOTTISH VOLUNTEER AMBULANCE TROPHY.—The first annual competition for the above trophy was held on 14th May. The competition, which took place in the 1st L. R. V. Drill Hall, was a keen one. The competing teams—fourteen in number—were tested in three subjects, viz., first-aid, drill and transport of wounded, and general knowledge; the last was

an oral examination. At the conclusion of the competition, the "Glasgow Highlanders" team were declared the winners of the trophy. The second and third places also were obtained by Glasgow teams.

The hall was filled by a large and appreciative audience, and the successful teams received a hearty ovation as Her Grace the Duchess of Montrose presented the trophy and badges. She was supported on the platform by, amongst others, the Marquess of Breadalbane, the Marquess of Graham, Sir William Taylor, K.C.B., Director-General of the Army Medical Service, General Tucker, Commanding the Forces in Scotland, and the Commanding Officers of the various volunteer regiments in the city.

The competition took place under the auspices of the Scottish Volunteer Medical Officers' Association, and its success was largely due to the untiring energy of the Honorary Secretary, Captain R. T. Halliday, R.A.M.C. (Vols.). The following officers acted as judges:—Drill—Major C. C. Fleming, D.S.O., R.A.M.C., Surg.-Lieut.-Col. A. Napier, V.D., 3rd L.R.V., and Major McGregor-Robertson, R.A.M.C. (Vols.); First-Aid and bandaging—Surgeon-Major Mill, 5th V.B.R.S., Surgeon-Captain A. K. Chalmers, 1st L.R.G.A.V.; General knowledge, Lieut.-Col. R. J. Geddes, D.S.O., R.A.M.C., Hon. Staff-Surgeon J. Macintyre, R.N.V.R., Brig.-Surg. Lieut.-Col. A. D. Webster, Q.R.V.B.R.S. The stewards were Captain R. T. Halliday, Lieut. H. W. Thomson, Surg.-Lieut. Abernethy, and Lieut. Edington. Lieut. Bruce acted as timekeeper, and Staff-Sergeant Instructor Lattemore, R.A.M.C., conducted the drill. The scores of the various teams were as follows:—

	First-Aid.	General Knowledge.	Drill	TOTAL.
5th (Glasg. Highlanders) V.B.H.L.I., (<i>winners</i>),	93	93	77	263
H.L.I. Brigade Bearer Coy. (<i>second</i>),	78	90	77	245
3rd V.B.H.L.I. (<i>third</i>),	46	90	85½	221½
1st L.R.V., Glasgow,	83	76	55	214
13th Coy. 1st Forfar R.G.A.V., Perth,	60	82	68	210
1st Lothian Brigade Bearer Coy., Edin., <i>B</i> team,	60	80	67½	207½
4th V.B.S.R., Glasgow, <i>A</i> team,	45	93	55	193
4th Coy., 1st Renfrew and Dumbarton R.G.A.V., Helensburgh,	76	93	23	192
4th V.B.S.R., Glasgow, <i>B</i> team,	41	80	68	189
1st V.B.R.S.F., Kilmarnock,	75	83	30	188
2nd V.B.S.R., Hamilton,	25	72	65	162
Seaforth and Cameron Brigade Bearer Coy., Inverness,	50	60	45	155
1st Lothian Brig. Bearer Coy, Edin., <i>A</i> team,	10	81	33	124
1st V.B. (City of Dundee) R.H.,	23	58	30	111

In each subject, the "possible" = 100 points.

In the evening, the annual dinner of the Association took place in the Windsor Hotel, under the presidency of Major Quintin Chalmers. Over 130 members and guests sat down, and the evening passed only too quickly. The toast list was a short one, and the various speakers were brief. The toast list having been gone through, the diners enjoyed a varied programme of music and song.

MEETINGS OF SOCIETIES.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1903-1904.

MEETING IV.—3RD FEBRUARY, 1904.

The President, DR. J. NIGEL STARK, in the Chair.

I.—SPECIMENS.

By DR. J. M. MUNRO KERR.—(1) Large uterine fibroid removed by supravaginal hysterectomy; (2) tubal pregnancy.

By DR. E. J. PRIMROSE.—Placenta from case of adherent placenta.

II.—NOTE ON THE X-RAY TREATMENT OF CANCER.

By DR. SAMUEL SLOAN.

The true position of *x*-rays in the treatment of cancer is still *sub judice*. There are enthusiasts and sceptics on this question, but what is wanted in the inquiry is enthusiasm blended with scientific scepticism; and, acting in this spirit, I have been trying to find out the truth for myself.

The President of the British Electro-Therapeutic Society gave an address at the British Medical Association meeting last summer, this being the first occasion in the history of the Association when electro-therapeutics was recognised as a sub-section of medicine. In this address, the President asked for more personal experiences in the *x*-ray treatment of cancer, believing, apparently, that the truth had not yet been arrived

at. I am venturing to give my own experience to-night. The number of cases is small—three only—but they are of more value to me than would be thirty from an unknown observer. The fact that they are all cases of cancer in women is my reason for bringing them before the members of this Society. That they are all genuine cases of cancer the records, I feel sure, will satisfy you; and I shall try to so state the case for and against the treatment as to enable you to form your own opinion of its value—its advantages, its limits, and its dangers—so far as the small amount of the material can make this possible.

The first case I shall refer to is one of cancer in the post-cervical portion of the vagina; whether a primary cancer of the vagina, an epithelioma of the cervix, or an adeno-carcinoma of the cervical cavity originally, could not be determined, for the disease was too far advanced to make it possible to say where the starting-point had been. The following is a brief history of the case:—

CASE I.—Mrs. S. (23rd June, 1903), æt. 40. First menstruation at 12; regular till marriage at 14; discharge lasting four to five days; three children before 17, all at full time; instruments at last confinement; was married a second time eleven months ago, after having been five years a widow. Menstruations were regular during widowhood, twenty-eight-day type, and discharge lasting four to five days, with no clots.

Since second marriage, periods still of twenty-eight-day type, but discharge clotted. For several months there has been a regular bleeding lasting for three to four days during the week following menstruation, and again during the week preceding the next menstruation. When not losing blood, there is always a discharge, offensive and greenish-yellow in colour.

There has been pain at intervals for five or six years—"like a knife cutting me up," patient says. Since the second marriage, there was always pain and bleeding after coitus, the pain and bleeding both lasting two days after each time. The general health is poor, and the patient is liable to attacks of faintness; there is no vesical or rectal distress.

A few weeks prior to seeing me, this patient had consulted a distinguished gynæcologist, who had declined to undertake the case, saying that no operation would be of service, and that the disease would probably prove fatal from hæmorrhage in about six months.

On examination, I found a mass, hard, irregular, cavernous, friable, bleeding freely on the merest touch, and filling up the whole of the upper and posterior part of the vagina. It was impossible to ascertain the position of the cervix, except a small portion of its anterior surface.

The disease extended down the posterior wall of the vagina to about an inch and a quarter from the vaginal orifice, this tongue of diseased tissue being about half an inch broad, and having hard, elevated edges. The case was too clearly malignant to make a microscopic examination necessary.

No information could be obtained by physical examination regarding the body of the uterus. The husband, on seeing my hesitation to undertake the case, begged of me to try something. I promised, if I could succeed in getting the diseased part exposed to the action of the *x*-rays, to try this treatment for six weeks, on the understanding that no promise as to benefit from the treatment was being made. I found, at first, considerable difficulty in getting the treatment carried out, but, by means of a modified Trendelenburg position and a tri-valve speculum, a fair amount of success was obtained. In spite of great care, however, the hæmorrhage was very profuse at each of the early applications. The first was made in the beginning of July, just at the close of a period, and they were continued daily for five days of each week till the beginning of the next menstruation, which was on 21st July. The report at the close of this period is—"There has been less pain, less discharge, and fewer clots than for two years." The treatment was continued with the same frequency till the beginning of August, when, on account of a renewal of the bleeding, a 2 per cent solution of formaline was applied. Efficient application was, however, difficult and painful, and the result was not satisfactory. The bleeding on this occasion, however, the patient said, was relatively not severe.

Treatment by the *x*-rays was again carried on from the 10th of August till the 21st, when the patient left for the country on account of my absence from home. Menstruation occurred on 22nd August, lasting till 26th. There was with that period "much less discharge than for years," and, up till the renewal of the treatment on 14th September, there had been no bleeding. On 18th September, there is noted—menstruation due to-morrow; there has now been "the longest interval free from bleeding since girlhood." There has been for some time now not a drop of blood lost during the applications.

On 12th October, the following note was taken:—The

squeamishness and languor are almost entirely gone; there is a considerable increase in strength, the patient stating that she can rise earlier and with less fatigue than for years. Since the *x*-ray treatment was begun, the pain, which had lasted for five or six years, has gradually diminished, leaving only a slight sensation of burning; and the general aspect is much improved. On making a full vaginal examination, the mass is ascertained to be perceptibly smaller and firmer, whilst the cavernous condition behind the cervix is almost gone. The diseased tissue can hardly be said to be friable now, and, in spite of free digital examination, not a drop of blood is lost. Beyond the ordinary menstruation, there has been no bleeding since the last report. Matters continued as satisfactory till about the middle of November, when the patient began to complain of increasing pain and of a discharge of yellowish foetid fluid, with general constitutional disturbance. There was no bleeding, however, in spite of a free examination. Iodine douches were ordered, and 3-grain doses of quinine were given three times a day. There being little improvement, a tube containing a vaginal projection, with *x*-rays emitted from the extremity only, was tried, but with no satisfactory result. The patient somewhat suddenly at that time losing strength, her friends urged her to consult two surgeons, both of whom said the case was inoperable, and not one that any form of treatment would be likely to benefit. No more *x*-ray applications were made. An inquiry about six weeks after showed that the patient was rapidly losing ground, but that, beyond a slight red staining on one occasion, there had been absolutely no blood lost.

CASE II.—Mrs. H., age 46, consulted me on 6th January, 1903, for extensive carcinomatous ulceration of chest wall on right side, there being an entire disappearance of the right mamma. The ulcerated surface, measuring $4\frac{1}{2}$ inches by $3\frac{1}{2}$ inches, was closely adherent to the wall of the chest, the edges were sharply punched out, partly circular, elevated and hard, and there was a constant discharge of a "mattery water," the surface being glazed and red. There were several secondary nodules round the ulcerated surface, some of them whole, some ulcerated, especially in the axilla, some of which were excavated, the edges being cracked and liable to bleed. There was also a chain of nodules running down the scapular surface, and several scattered over the rest of the chest wall, with œdema of the right arm. The pain had not been acute—more a constant soreness. The general health was fair. She

informed me that the disease began four years ago, and, although Professor Macewen, when consulted, had advised removal of the breast, no treatment whatever was adopted. Electric treatment was at once commenced in the form of the static breeze, a spark gap being employed. Within three weeks, the half of the ulcerated surface was covered with healthy, new epithelium. Where cavities existed, these were filling with healthy granulations, within which islets of pearly, young epithelium seemed every day to start and form connections with the epithelium round the edge of the ulcers. This went on without any flattening of the edges, and sometimes with the surface of the ulcer considerably excavated, not like the simple healthy ulcer which refuses to heal until it is exactly on a level throughout with the surrounding skin. Some of the ulcerated nodules would sometimes become covered with a dry, glazed film, as if an attempt were being made to cover it with epithelium of a sort before it was properly prepared for normal healing. These ulcers, however, did not retain their glazed covering for any length of time. This satisfactory progress continued till the 18th February following, when a slice was taken off one of the nodules for microscopic examination. Dr. Leslie Buchanan, to whom I sent this for examination, reported as follows:—"Probably the original growth was a scirrhus carcinoma of the breast, and this tissue sent to me is part of a secondary nodule." The surface left from the removal of this slice of tissue became very unhealthy-looking, and there was great pain in it, whilst a large part of the young epithelium from the already healed part separated, and the healing process had to be started afresh. By 8th April, the ulcerated surface was again covered with healthy epithelium, and the cavities were filling up in a very satisfactory manner. Patient now went to the country for four weeks. On her return on 21st May, the disease had increased in the sense that more nodules had formed and those previously there were larger. It became quite evident that the static breeze, whilst quite capable of healing ulcerated surface arising from broken-down nodules, was quite incapable of influencing the nodules themselves, unless to the extent of hastening the removal of the sloughy tissue from their surface, and thus permitting the formation of new epithelium. Having come to this conclusion, I began the application of *x*-rays. The result was practically the same as from the static breeze, there being steady progress in the process of healing of the ulcerated surface. In about three weeks, however, without any warning, the new epithelium became stripped off, and the

whole surface became covered with a dirty grey membrane. There had been no change in the tube used, in the amperage, in the manner of using it. The surface was dressed with calomel ointment, and the patient sent to the Highlands. On returning, the most of the superficial slough had disappeared, and the surface was looking fairly well. When healing had been again completed, sometimes by the use of the x-rays, and sometimes by the static breeze, I made an attempt to get a tube that was likely to cause dermatitis, so as to break up the nodules, and succeeded in getting one with a bad reputation for this. This one was used once only for six minutes on 17th January last, two thicknesses of lead foil being employed to protect the healed surface. During the most of the exposure, pain was complained of, though the patient had never expressed herself as suffering any pain from previous applications of the rays. This pain lasted all the rest of that day, and the following day there was extensive sloughing, beginning on several of the nodules, notably on those uncovered by the lead foil. Over the previously healed part several deep ulcers soon formed, covered with a dirty grey membrane. These are, however, now beginning to heal. There has never been any scar-like tissue, nor any traction on the surrounding skin, and the boundaries of the previously ulcerated part are now on the level of the surrounding skin, it being scarcely possible to tell where the original elevated edges were. Patient suffered constitutionally from this last application of the rays, the tongue becoming coated with a thick yellow fur. A course of quinine and grey powder has considerably improved matters, and a tonic afterwards, of nitro-muriatic acid and cinchona, has left the patient practically as well as before this destructive action began. The process of separation of the sloughs is going on, and as soon as that is completed under the static breeze, a healthy surface will form, and this will soon be covered over with healthy epithelium. Nothing, however, is being able to arrest the growth of the old nodules or the development of new ones, the left breast having several of them on its surface.

CASE III.—Mrs. G., æt. 68. This lady had cancer in the neighbourhood of the cæcum, with characteristic symptoms. She died on 28th October, 1903. Several weeks before death, on the advice of the consulting physician, x-ray treatment was tried with the object of relieving the pain. The first application was, the patient declared, followed by pain so severe that she insisted upon the apparatus being removed from the house.

The pain did not start until about two hours after the application, but it lasted for more than twenty-four hours. It was described as "like knives." There was no dermatitis. Believing that this pain was due mainly to nervous excitement, I persuaded her, though with some difficulty, to try it again, promising to reduce the dose and the time of application. The pain following was in no way less nor less prolonged. It was used later on for a third time, with a still smaller dose, but with the same result. I have since been making inquiry into the history of this tube, which was sent by and returned to Mr. Trotter, and have some reasons for suspecting that it may be the same one which was sent to me last month to try in Case II.

I have tried to give you a faithful account of these cases, but I need not trouble you with electrical details, this being more appropriate at a meeting of the Electro-Therapeutical Society. I think you will agree with me in the following conclusions:—

1. That electric energy in some form is capable of producing good results in certain cancerous cases, which no other known agent can compete with.

2. That while this result may follow the use of the *x*-rays and static breeze, the former must be admitted to be more erratic in its action, and not free from danger. My experience, at least, of it would not warrant me in recommending it in early cases. If I had another case of cancer in the cervix uteri to treat, I should prefer to use the static breeze, by means of a long wooden electrode passed through a vulcanite speculum. The latter could be shaped so as, while distending the vagina, to insure that the whole diseased surface was exposed to the breeze.

Several interesting questions arise as to why the *x*-ray tube should behave in this erratic way. Is it a change in the condition of the tube? Is it a disturbance of the general health of the patient from some other cause, or are the *x*-rays cumulative in action? Again, is it the electrical oscillation outside the tube, or is it the *x*-rays pure and simple that have the good or bad effects? I have no doubt, however, that in whatever way it acts, so long as the diseased tissue does not take on a necrotic change, the general health of the patient is greatly improved during the treatment; and, if bleeding and offensive discharge can be arrested, as is evidently the case, and the general condition of the patient can be benefited, we have, by these measures, always barring accidents, a means of

increasing the comfort, improving the strength, and thus prolonging the life of the patient in inoperable cases of cancer; but there is still a considerable difficulty in knowing how to procure all the good, and none of the evil effects of the treatment.

III.—SOME PATHOLOGICAL CONDITIONS OF THE FALLOPIAN TUBE.

BY DR. A. LOUISE M'ILROY.

Before entering upon the subject which I have brought under your notice to-night, I must express my indebtedness to Dr. Kelly for his kindness in allowing me to make use of the clinical material under his care in the Royal Infirmary, and also for the use of the pathological specimens from his laboratory there.

At this stage of our knowledge of gynæcological conditions it is quite unnecessary for me to point out to this Society the various diseases which affect the Fallopian tubes, their causation, progress, and treatment—these can be found in every modern text-book. But what forms a never ending source of new information is the cases and pathological specimens connected with them which come under our notice day after day. No two cases are ever alike in every detail. One may be inclined to imagine that there is a great similarity in gynæcological reports, with their histories of lateral pain, irregular menstruation, dysuria and constipation, &c. Many are similar, but they all differ on examination, and especially in the pathological condition of the specimen. The tendency of the present day is to lay great stress on the museum specimen, as it opens out such a large field of new material for investigation. The cases which I bring before you are such as may be grouped into diseases of the Fallopian tubes, comprising in first group, hydrosalpinx; second group, hæmosalpinx; third group, tubal gestation. I have specially taken up these as being of interest from the specimens which we obtained from them.

Hydrosalpinx is the distension of the tube by watery fluid, caused in every case by an inflammatory condition of the walls of the tube, *i.e.*, a salpingitis. The watery fluid may be caused by swelling of the mucous membrane owing to a small-celled inflammation, the plicæ become adherent, œdema of deeper parts takes place, serous fluid is secreted, adhesions form, and, by blocking up the abdominal ostium, the fluid is retained within the tube, and we have the formation of the typical retort shape. In old cases of pyosalpinx it is suggested

by Bland Sutton and Doran that this fluid is secondary to pus formation, the whole tube wall being thinned out until only thin fibrous tissue is left. This, I think, is rare, as most of the cases of hydrosalpinx have contained no evidence of pus formation, nor could any micro-organisms be found in the tube interior. The fluid may also be secondary to hæmorrhage which may have arisen from a pregnant condition of the tube. Also, a perfectly healthy tube may become sealed in its outer end by surrounding peritonitis which originated in opposite tube. This causes retention of the normal secretion of the tube. This condition we often see. The uterine end of the tube is seldom occluded, except in acute cases. Thus, in cases of hydrosalpinx we have a cystic formation, the fimbriated end of the tube only being recognised in many cases by a dimple or depression. The tube is usually of small size, and often accompanies fibroid conditions of the uterus. The following case is of much interest owing to the size of the swelling, and to the torsion which the tube has undergone.

Clinical history.—Patient, æt. 43, married twenty-three years, v-para, last child 11 months of age, admitted into Royal Infirmary on 31st August, 1903. Menstruation began at 14, four weeks type, lasting five to seven days; pain first two days. During last pregnancy had pain in left hypogastric region; during labour she felt as if something obstructed delivery, but the labour and puerperium were normal. On getting out of bed had pressure symptoms in bladder and rectum, present till admission.

Examination.—Some resistance in left side of pelvis to deep pressure. *Per vaginam*, firm, cystic, rounded mass in Douglas's pouch, tender to firm pressure; sound, 2½ inches in ordinary direction. At operation the left tube was removed, being adherent to surrounding organs.

Pathological report.—The specimen shows a large cyst formed by the dilatation of outer end of left Fallopian tube. The cyst is about the size of an orange, and contains blood-stained fluid. Along its upper surface, and connected by the mesosalpinx, is the tortuous inner tube, but its outer connection with the cyst is not defined, owing to an area of necrotic tissue. The cyst is adherent to the tube about its middle third by a band of peritoneum. At this portion the uterine end of the tube has undergone complete torsion. Farther along, the walls are thickened until about a quarter of an inch from uterus, where the tube again has become twisted and its lumen occluded. At the lower end of the cyst is seen a small pea-like body—the hydatid of Morgagni—showing the presence

of the fimbriated end. The ovary shows the presence of several small hæmorrhagic cysts.

"The specimen was hardened in 5 per cent formalin. On incision, the fluid contents were chocolate coloured, with flakes of fibrin. The interior of cyst shows the trabeculæ of the tube stretching over the walls. Microscopical examination of the tube about its middle third shows the whole tube lumen to be filled with blood clot; no mucous folds are seen; the muscular wall is thinned, and contains large blood-vessels.

"This specimen, as far as my researches have gone, seems to be unique, the complete torsion of the tube, with the shut off cyst in outer part of tube, being of great interest. The condition has probably been one of hydrosalpinx in outer third, then torsion has taken place owing to its dependent position, the pressure of surrounding organs—maybe at time of labour—causing necrosis of tissue and effusion of blood into tube lumen. At first glance one would suppose it to be a parovarian cyst, but the hydatid of Morgagni—the folds on lining wall—point to the tube. The parovarian and ovary are seen to be quite separate. The presence of an old tubal gestation has also been considered as a factor in the causation of the cyst formation, but there is no microscopical evidence of this, nor were any bacteria found showing the previous presence of pus."

The second case of hydrosalpinx is much more typical. The patient, æt. 40, married eight years, multipara, was admitted 8th September, 1903. Menstruation began at 13, four weeks type, lasting three days.

History.—A year ago had pains in back and abdomen, pain on micturition. Menstruation became irregular, and the period prolonged.

Examination.—Tenderness over left iliac region. *Per vaginam*, irregular, tender mass—nodular—in Douglas's pouch, representing both appendages. At operation both sets of appendages were removed; uterus contained several small myomata.

Pathological report.—The left tube is considerably distended with blood-stained fluid, increasing in size towards abdominal end, where it becomes adherent to inner end of tube; it is retort-like in shape. The uterine end is patent; the fimbriated end is only indicated by a depression on the surface of the tumour. The right tube is distended with clear fluid, is small, and is bound together by adhesions. Both ovaries are atrophied, and contain hæmorrhagic cysts. No bacteria were found in the fluid.

"This case is interesting, as the specimen is so typical of those described in text-books. The myomatous condition of the uterus may have caused some irritation in the tubes, thus setting up a salpingitis with closure and fluid retention. The ovaries and tubes were covered with adhesions, showing the presence of some degree of peritonitis."

In second group: Hæmatosalpinx.—It is difficult to define the exact meaning of the word hæmatosalpinx, as the conditions are so varied. Some specimens consist of almost apparently healthy tubal tissue, with a few blood corpuscles in the lumen; in others the walls are completely deorganised by blood clot. The former condition is seen in tubes taken from cases of uterine tumours, the latter are almost wholly due to tubal gestation. Cullingworth defines hæmatosalpinx as "an effusion of blood into the tube from whatever source." All these tubes are not necessarily closed, many in cases of tubal gestation are open. In many cases of tubal pregnancy the opposite tube is filled with blood. This is probably due to pressure from the adjoining hæmatocele. The following two cases arise quite independently of tubal gestation.

CASE I.—Patient, æt. 24, married four years, i-para about three years before, admitted on 25th February, 1903. Menstruation began at 15, twenty-eight day type, lasting seven to eight days.

History.—Had good health until birth of child; two months after confinement had sudden attack of pain in left side, sickness and vomiting, with feverishness. Pain constant since then, but worse at periods; occasional menorrhagia.

Examination.—Tenderness on left side of pelvis, increased resistance. *Per vaginam*, uterus in normal anteflexion, left appendages form a considerable mass, tender, and passing towards Douglas's pouch. At operation both sets of appendages were removed from dense adhesions.

Pathological report.—*Left tube* is very tortuous and adherent to ovary, contains a great number of peritoneal cysts with clear fluid and caseous-like masses. Ovary contains numerous small cysts. *Right tube* tortuous, fimbriated ostium patent. Both tubes contain fluid blood. *Right ovary* is somewhat enlarged, and contains cysts. On surface of ovary near opening of tube is a small hæmorrhagic tumour, size of a hazelnut, enclosed in a thin capsule. This appears to be the coagulated deposit of some hæmorrhagic discharge from the tube.

"Microscopically, the tube walls show erosion of epithelium, large spaces in muscular wall, and blood corpuscles free in the lumen. No evidence of pregnancy anywhere."

This has probably been an acute tubal inflammatory condition, perhaps originating in some latent puerperal infection.

CASE II.—The second case was one occurring in uterine myoma. Patient, æt. 44, married eighteen years, ii-para, last twelve years ago, instrumental, admitted into Glasgow Royal Infirmary, 16th January, 1904. Menstruation began at 13, four weeks type, four to five days.

History.—One year after confinement had metrorrhagia for two years, then regular for two years; then she had occasional "floodings," but never missed a period at any time.

Examination.—Abdominal, *nil*. *Per vaginam*, portio vaginalis at vulva, elongated, sound 5 inches. Firm solid mass in Douglas's pouch and towards left fornix, almost fixed.

Diagnosis.—Myoma. At operation myoma was so incorporated in uterine wall, that it was thought advisable to leave it. Both sets of appendages were removed, and uterus stitched to abdominal wall.

"Pathological report.—Both tubes are closed at abdominal ends, fimbriæ turned in, both contain fluid blood. Left tube has a large dilated hydatid of Morgagni. Left ovary contains a corpus luteum; right, several small cysts. Tubes, split up after hardening, show chocolate coloured fluid in interior; no evidence of pregnancy. The walls are not much altered, the hæmorrhagic condition being probably due to pressure from enlarged uterus."

Tubal gestation.—In coming to the second part of my paper, that of tubal gestation, it is quite unnecessary to take up your time with any explanation of this condition, it is so well known and so well written about in journals and text-books. I will merely describe to you the several individual cases which have occurred during the last few months in our clinique in the Royal Infirmary.

CASE I.—Patient, æt. 34, unmarried, nullipara, admitted 5th November, 1903. Menstruation began at 12, twenty-day type, lasting six days.

History.—Sixteen days ago, after period of forty days' amenorrhœa, patient had severe sudden pain in hypogastrium, accompanied by profuse hæmorrhagic discharge. She had sickness and vomiting, and was doubled up by the severity of the pain. Has had pain, but not so acute, ever since.

Examination.—Large cystic swelling in left lateral fornix and Douglas's pouch. On operation, both sets of appendages removed.

"Pathological report.—Specimen shows sausage shape swelling of left tube, ovary attached. Tube is deeply congested, $3\frac{1}{2}$ inches in length, 1 inch in breadth. The dilatation is at middle and outer third. Fimbriated end patent with typical collar of fimbriæ surrounding the ostium. On the surface of the tube is a vertical band of fibrinous deposit showing where it was attached to the pelvic hæmatocele. Ovary is small, and contains a corpus luteum containing cystic fluid. The specimen was hardened in 5 per cent formalin, and incised in a longitudinal direction. The uterine and abdominal ostia are patent, there being a direct communication between the interior of tube and hæmatocele sac. The whole tube is filled with laminated blood clot, having some amniotic membrane in its centre. The tube walls are thinned out to resemble paper. The clot is easily separated from the walls, except near uterine end. Here we obtained microscopical evidence of degenerated chorionic villi. The condition has been an incomplete tubal abortion, the mole being attached to middle third of tube, the blood flowing out at the abdominal ostium, and thus forming the pelvic hæmatocele. The ovary contains a small cyst, the remains of a corpus luteum."

CASE II.—Patient, æt. 38, married thirteen years, ii-para, last child eight years ago, miscarriage two and a half years ago, admitted 5th May, 1903. Menstruation began at 16, twenty-eight day type, lasting seven days.

History.—Always healthy until six weeks ago when, a slight pain began in left side, due to severe work. Previous menstruation regular. Had eight weeks' amenorrhœa, followed by severe abdominal pain, rigors, and vomiting. Since onset of present symptoms she has had several attacks lasting several days, and has had to take to bed occasionally. Has had pain on micturition.

Examination.—Fulness in left side of pelvis, with tenderness. *Per vaginam*, cervix far back in pelvis, uterus anteverted, firm mass in left side, mobile, tender but non-pulsating. No tumour in Douglas's pouch.

At operation left tube and ovary raised up from a mass of adhesions and removed. Other tube and ovary also removed.

"Pathological report.—Specimen shows the left tube to be the site of a pregnancy; it is greatly enlarged and tortuous, forming a mass about the size of an orange. Weight, 4 oz.; length, $2\frac{1}{2}$ inches; breadth, 2 inches.

"The ovary is incorporated with the tube walls; the remains of some fibrin are seen attached to its outer end, where the hæmorrhage had taken place through the abdominal ostium. The walls are much distended, but not ruptured.

"On opening the mass after hardening, the hæmorrhage has taken place into the outer half where the pregnancy has been. The entire lumen is filled with laminated blood clot, with some amniotic membrane in its substance. There has been no rupture of the walls. The fimbriated end is dilated, and the hæmorrhage has escaped through the ostium. No embryo is found, but chorionic villi are seen on microscopical section. This is, therefore, a case of incomplete tubal abortion. Both ovaries contain small cysts.

"The other tube is interesting on account of its walls being distended with fluid blood. The abdominal ostium is occluded, and only recognised by a dimple on the surface. The tube, after hardening, is seen on section to be filled with thickened blood, enclosed in loculi within the lumen. This tube demonstrates the presence of a hæmatosalpinx in the opposite side to a tubal pregnancy."

CASE III.—Patient, æt. , married twenty-seven years, viii-para, last child two years ago, admitted 17th December, 1903. Menstruation began at 13, four weeks type, lasting four days. Pain during first day.

History.—On 18th November, patient took severe pain in lumbar region, like labour pains; two hours later had vaginal discharge; next day fainted for thirty minutes. Previous to this had eight weeks' amenorrhœa, with morning sickness and fulness in breasts. Since onset, pains irregular, sometimes very severe.

Examination.—Some tenderness in abdomen. *Pervaginam*, fulness and tenderness in left fornix and Douglas's pouch. Both sets of appendages removed on operation, with a small hæmatocele sac.

"*Pathological report.*—Specimen shows tube and ovary of left side, the tube being much enlarged in its outer third to about the size of an orange, forming a tumour-like mass, showing where the pregnancy has taken place. The specimen is much congested in appearance, œdematous, and is covered with fibrin and the remains of peritonitic adhesions. The uterine ostium is patent, dark fluid blood being expressed from the interior of the tube. The fimbriated end is not seen, being fused in the large tumour mass. The ovary is also incorporated in this mass. The right tube is congested; the ovary somewhat cystic, and adherent to hæmatocele sac.

"After hardening, tube was opened, and there was found in the ampulla part a firm, laminated blood clot, in the interior of which is sub-chorionic chamber, also filled with blood, the amniotic membrane inside enclosing a six weeks' embryo attached to clot by umbilical cord.

"In this case rupture had taken place in between the layers of the broad ligament, the abdominal ostium being closed. The right ovary contains a fresh corpus luteum."

CASE IV is of interest owing to operation being performed before rupture had taken place. Patient, æt. 26, married five years, ii-para, last five years ago, admitted 23rd September, 1903. Menstruation began at 17, four weeks type, lasting four days.

History.—Regular menstruation until last June, when she had period of amenorrhœa, with morning sickness. In September, when getting out of bed to dress, she took a severe pain, like cramp, in abdomen, which caused her to double up and fall on floor. This was followed by rigors and sweats. Four days after, had vaginal discharge for a week, when some placental-like tissue was passed. She was plugged for a week.

Examination.—*Per vaginam*, cervix in ordinary situation: rounded, softish mass above left fornix between uterus and pelvic wall, and passing into Douglas's pouch, pulsating over its lower surface.

Operation.—Tube raised out of adhesions and removed.

Pathological report.—Specimen shows left tube with a tubal pregnancy in its outer third. The walls are unruptured. The tube is distended to about the size of a hen's egg, oval in shape. The surface is smooth and glistening, and injected with blood-vessels. Inner part of tube was normal, and was not removed. The middle third is congested and thickened. Fimbriæ swollen and surround the ostium, which is patent. Partly covering the ostium is a small deposit of fibrin, the result of a "blood drip" from the tube interior. On opening the tube along its ligamentary margin, the amniotic cavity is seen filled with clear fluid and glistening lining. The space between amnion and chorion—chorionic chamber—is filled with dark blood clot. At upper surface of cavity is attached a small embryo, about an eighth of an inch in length. The pregnancy has occurred almost at ostium of tube, but is shut off from fimbriated opening by fibrinous clot. The tube wall is stretched over the mole, so that the peritoneal covering only remains as its capsule.

"Doubtless, if interference had not been resorted to, the

tube would have increased in size so as to cause rupture of its contents into the peritoneal cavity, with the accompanying hæmorrhagic conditions."

These are a few of the cases which I thought would be of interest to you, and I must, in conclusion, apologise for the greater stress which I have laid upon the pathological side than on the clinical.

Dr. Balfour Marshall said a distinction had to be made between true hydrosalpinx and those cases of old pyosalpinx where the tubal wall had become thinned and the contents watery.

Dr. J. K. Kelly, in the course of his remarks, stated that formerly he was sceptical of a hæmatosalpinx existing independently of tubal gestation, but he had changed this view since he had seen two cases.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1903-1904.

• MEETING VIII.—20TH JANUARY, 1904.

The President, DR. CHARLES R. M'LEAN, in the Chair.

I.—A SACCULATED AORTIC ANEURYSM ALL BUT OBLITERATED BY LAMINATED CLOT.

BY DR. JOHN W. FINDLAY.

This specimen was obtained from a sea-going engineer, aged 51, who had been able to follow his occupation till three and a half months prior to his death. When first seen by me at the end of October, 1903, he presented many signs of an aneurysm of the transverse portion of the aortic arch, viz., heaving pulsation over the manubrium, in the first two spaces to the right of the sternum and in the jugular fossa; displacement of the trachea to the right of the middle line of the neck; an exquisite degree of tracheal tugging; dulness on percussion over and to either side of the manubrium; left radial pulse smaller and weaker than the right; a hoarse brassy cough, and paralysis of the left vocal cord; inequality

of pupils, left distinctly larger; over the aneurysmal dulness, and conducted into vessels of neck, a faint and short V.S. murmur, followed by a markedly accentuated aortic second sound. There was no dysphagia, no distension of veins, and no difference between the volume of the respiratory murmur on the two sides of the chest. He acquired syphilis when aged 39, had suffered from malaria, and had been a hard worker and hard drinker all his life. Severe attacks of dyspnoea became the prominent symptom; these got more severe and more frequent as time wore on, and ultimately caused his death. Potassium iodide was exhibited at different times, but always disagreed after a few days, and had to be discontinued. During the last month of life the only drugs he had were morphia, nitroglycerine, and amyl nitrite.

At the autopsy—confined to thorax—the heart was found to be covered over by emphysematous lungs (no cardiac dulness or pulsation was made out during life); the left ventricle presented a moderate degree of hypertrophy, the aortic and pulmonic valves were competent and healthy, as were also the other valves. Both lungs were in a condition of cedema and hypostatic congestion. A large solid aneurysmal tumour lay between the aortic arch and the heart.

The ascending portion of the aorta is dilated in a fusiform fashion, and at a distance of $1\frac{3}{8}$ inch above the semilunar valves opens into the sacculated aneurysm. This sac has come off the inner aspect of the ascending aorta, the lower and posterior parts of the transverse aorta, and the inner aspect of the descending aorta, which is involved to a distance of $1\frac{1}{2}$ inch beyond the origin of the left subclavian artery. The greatest transverse measurement of the aneurysmal sac is $4\frac{1}{4}$ inches, while from the summit of the aortic arch to the lowest part of the aneurysm is 4 inches. The aneurysm has a maximal antero-posterior measurement of $3\frac{1}{4}$ inches. The upper parts of the ascending and descending aorta show a few small calcareous plates and some atheromatous thickenings. The connective tissue wall of the aneurysm seems much about the thickness of a normal aorta. The sac is all but filled with a firm white laminated clot; this clot is everywhere closely adherent to the inner wall of the sac, though the sac can be peeled off it, much as a rind can be peeled off an orange, suggesting that organisation of the clot has not yet commenced. In the centre of this laminated clot is a small blood-stained cavity, measuring half an inch antero-posteriorly, and $1\frac{1}{4}$ inch vertically. This central cavity in an antero-posterior section is somewhat pear-shaped, and is connected with the

patent part of the aortic arch by a very thin linear neck; its lowest limit is distant 2 inches from the aortic arch. It can be traced through the clot from ascending to descending aorta, and has evidently been the principal blood channel; it has a lumen much like that of an ordinary aorta. The blood channel in the upper part of the sac is triangular in shape, with walls about half an inch long.

This laminated clot encroaches on the posterior aspect of the commencement of the innominate artery, and has all but closed up the orifice of the left common carotid, while the left subclavian artery is reached by a tunnelled passage through the clot. The right pneumogastric nerve, beyond the recurrent laryngeal, is flattened out over, and firmly adherent to, the posterior surface of the aneurysm, while many of its branches are actually incorporated in the aneurysmal wall. The left pneumogastric nerve, which courses over the anterior surface of the aneurysm, can be traced to the lower border of the same, and then beyond, but no connection can be made out between it and the left recurrent laryngeal nerve, which is only recognisable as such for a very short distance below the upper limit of the sac on its posterior aspect.

The trachea is firmly adherent to the aneurysm for a distance of $2\frac{3}{4}$ inches above its point of bifurcation, and the bronchi are in a like condition—the right for a distance of 1 inch, and the left for $1\frac{1}{4}$ inch. The pulmonary arteries are much compressed.

The interest of this case lies in the fact that the aneurysm has been all but obliterated by white laminated clot, which, however, as yet shows no evidence of organisation. Though common to find some laminated clot, it is by no means usual to see such progress in the direction of cure (spontaneous, too) as here obtains. The circulation had evidently been carried on by two channels, all but separated from one another, the larger one, through the centre of the clot, no doubt conveying most of the blood-supply to the descending aorta. It is interesting to note that coincidently with the great obliteration of the aneurysm the man's symptoms became worse, and we can understand how it should have been so when we see what a solid tumour this all but obliterated aneurysm made, and also how seriously the functions of both pneumogastric nerves must have been compromised by the presence of the same.

Dr. J. Lindsay Steven congratulated *Dr. Findlay* on his accurate and full description of the clinical history of the

case, together with the anatomical demonstration of the specimen. He could not add much to what had been described, as he only saw the man in consultation two or three days prior to death. He could suggest nothing more than what had been done, as there was in this case no hope from medicine. He prescribed hypodermic injections of morphia to be continued, and in order to reduce the blood-pressure nitrous ether was given to relieve dyspnœa. The patient was too ill for an extended examination, but the physical signs were sufficiently evident, including a manifest pulsation to the right of the sternum in the second and third interspaces. He was inclined to locate the lesion in the ascending portion of the aorta, but most of it seemed to be beneath the transverse portion—where the laminated clot had occurred, and the pulsation felt was due to the aneurysm pushing over to the right. The left vocal cord paralysis was the one most frequently met with, and he had often found the same lesion as in this case, and thought that there might be two aneurysms. He would direct attention to two points—first, the extremely firm nature of the laminated clot; he recollected only one other such case, which occurred in an aneurysm of the abdominal aorta, the specimen of which was placed in the museum of the Glasgow Royal Infirmary about the time when Professor Macewen was trying the needling of aneurysms—this specimen was shown to Dr. Macewen as a cure, and he admitted that the white laminated clot was what he wanted. In the case referred to the clot was perfectly laminated. He (Dr. Steven) had a difficulty with the question of needling, for by irritating the internal surface of an aneurysm, and so causing a deposition of leucocytes, we get a vital clot, and this will become organised, as time goes on, with the formation of a thrombus. Again, the vascular wall of an artery, when irritated by the needle, will become hyperæmic, and lead to the production of a vital thrombus, to which the cure is due. Dr. Pringle used to needle aneurysms for him, but at the *post-mortems* no change was seen to have come about in the empty sac. Regarding the differential diagnosis between cardiac disease and aneurysm, it was to be noted that even in those cases where the aneurysm was large, it was uncommon to find enlargement of the heart as a whole; in Dr. Findlay's case it was not enlarged as in cardiac valvular disease. There was no striking hypertrophy capable of being recognised by the apex being displaced downward; it did not, however, establish a general law.

Dr. Jas. Dunlop said many cases of aneurysm were found in young men. Sir William Gairdner drew attention to this, his experience being that it was common in shipyard workers. He concurred with Dr. Findlay as to the value of morphia hypodermically in the treatment of spasms due to aneurysm. As to diagnosis, he remembered a case in the wards where an aneurysm was diagnosed, measured, and pulsation elicited, and yet at *post-mortem* no aneurysm was found.

Dr. H. H. Borland said the perfect cure in Dr. Findlay's case more than ever convinced him that it was a mistake to treat aneurysms by gelatine injections to produce thrombosis, as it was obviously the case that the intravascular thrombosis so produced to cure the aneurysm would likewise cause the death of the patient.

Dr. R. Service deplored the fact that in general practice it was rarely possible to obtain a *post-mortem* in order to verify the diagnosis.

Dr. P. S. Buchanan said he found many poorhouse subjects under 40 or 50 years of age suffering from aneurysm.

Dr. C. R. McLean referred to the points raised by Dr. Lindsay Steven. He had been struck with the natural healing of aneurysms, and with the frequency with which sufficient lumen, nevertheless, had been left to carry on the circulation.

II.—EXHIBITION OF A SERIES OF PREPARATIONS OF ANEURYSMS OF THE AORTA FROM THE MUSEUM OF THE VICTORIA INFIRMARY.

BY DR. JOHN ANDERSON.

In describing the various lesions observed in the specimens, Dr. Anderson briefly discussed the pathology of the disease. Referring to the question of hypertrophy of the heart in cases of aneurysm, he was of opinion that the displacement of the apex might rather be compared to that of kidney disease.

He directed special attention to Dr. Monro's specimen, where there was hypertrophy; but in this case there were pericardial adhesions, and two small aneurysms near the valves of the heart.

Dr. Lindsay Steven congratulated Dr. Anderson on the very valuable pathological work that he was doing at the Victoria Infirmary.

REVIEWS.

Manual of Surgery. By ALEXIS THOMSON, M.D., and ALEXANDER MILES, M.D. Vol. I: General Surgery. Illustrated with 262 Wood Engravings. Edinburgh and London: Young J. Pentland. 1904.

ONE would have thought that the number of smaller works on surgery, of most of which new editions have been issued so recently, was more than sufficient for those for whose use they are intended. But, apparently, this opinion is not universally held, or, perhaps, it is felt that these works are something short of what should be. Whatever the reason, Messrs. Thomson and Miles have determined to offer the profession yet one more.

In the preface to this, the first volume of the work, the authors tell us that their aim has been to "furnish a systematic view of the present-day aspects of surgery in sufficient detail to render it useful to the practitioner, without at the same time carrying it beyond the scope appropriate to a manual for students." Histological appearances are neither described nor illustrated, their place being, in the authors' opinion, in a text-book of pathology. On the other hand, the surgical anatomy of the various regions and tissues concerned is given briefly. There are 262 illustrations in the volume, and these are nearly all original and appear now for the first time.

The contents of the volume embrace such general subjects as repair, inflammation, suppuration, gangrene, syphilis, tuberculosis, and tumours. The affections of the various systems or tissues are next considered, and the concluding portion of the volume deals with injuries occurring in the various regions of the limbs.

When one considers that the above material is presented in a crown octavo of 700 odd pages, along with between two and three hundred illustrations, it will be seen that the authors' aim as regards the "scope" of the volume has been pretty well achieved. While the earlier portion of the book is, on the whole, very well done, we cannot but notice that immunity is very briefly noticed, and we think that more detail in this matter would not have been amiss.

The surgery of the various systems and tissues is well described, although concisely put. The concluding chapters,

on the injuries of regions, are well arranged for the convenience of the reader, and, although there are some errors and some expressions of opinion which will not be accepted unquestioned, we think that the authors have succeeded in producing a work which will appeal not only to local students, but which will be read by others with distinct profit.

It is long since a work on general surgery has been published in Scotland, and we have no doubt that this *Manual* will satisfy the demands and fulfil the expectations of those who feel that surgery north of the Tweed is cherished and studied, and, further, that it is well abreast of the times.

Stretcher Drill, Illustrated. Second Edition. Including the new Hand-seat, Wagon, and Railway Wagon Drills. By MAJOR J. J. DE ZOUCHE MARSHALL. Teddington: T. W. Childs. 1904.

WE cannot too highly praise this little book, as we feel that it accomplishes well its aim of being an aid to the volunteer medical officer. In such a work, accuracy is of the first importance, and, as nearly as possible, we have it here. Slips in the text are noted on a list of errata, but we would draw the author's attention to a mistake in the errata—"p. 9" should read "p. 20." Again, on p. 13, the word "file" is given in the command to Nos. 3. This word is omitted in the official *Extract* (p. 5). On line 21 of same page the word "covered" should be "lowered."

The most valuable part of the work is the original diagrams. These, when once the reader has become accustomed to them, will prove of the greatest service in helping him to form a mental picture of the different movements.

This volume should be in the hands of every volunteer medical officer.

The Treatment of Fractures, with Notes upon a few Common Dislocations. By CHARLES LOCKE SCUDDER, M.D. Fourth Edition, thoroughly revised, with 688 Illustrations. London: W. B. Saunders & Co. 1903.

THIS edition purports to be "thoroughly revised." If so, we must differ from the author as to the meaning of the word "thoroughly," and we would respectfully refer him to our review of the second edition, published in 1901.

Setting aside, however, the repetition of obvious errors, we find the present edition a considerable improvement on the former one. In the first place, there are many additional illustrations, and there are not a few reproductions of photographs substituted for previous sketches. We would particularly draw attention to the beautiful skiagraphic reproductions in the chapter on the epiphyses. There is also a chapter on gunshot fractures, and another on common dislocations; of these, the latter is certainly well done.

In spite of the addition of seventy-odd pages, the volume is not much larger than before, and we can heartily repeat our recommendation of it to those who desire a practical guide to the treatment of fractures.

The Pocket Medical Dictionary. Edited by W. A. NEWMAN DORLAND, A.M., M.D. Fourth Edition. Revised and Enlarged. London: W. B. Saunders & Co. 1903.

THIS is a remarkably good dictionary so far as it goes, and any faults and failings it has are to be attributed to its *multum in parvo* character. The pronunciation and definition of all the principal terms used in medicine and the kindred sciences will here be found, along with over sixty extensive tables, which serve to group correlated facts in a convenient form for quick consultation. The tables, as a rule, are also very good, but we are surprised to find under the heading "signs of disease," that two such well known and important signs as Babinski's and Kernig's have been omitted.

The Medical Annual: A Year-Book of Treatment and Practitioner's Index. Twenty-second Year. Bristol: John Wright & Co. 1904.

It is scarcely necessary to do more than call attention to the appearance of this well-known *Annual*. The text of the present volume is the work of more than thirty contributors, whose province it has been to present to the reader in as concise a form as possible the fresh results that have been obtained in the different departments of medical research. A new departure in connection with this volume is the introduction of a series of stereoscopic views to illustrate the anatomy of the ear. These ought to be of particular value to

those who are interested in the modern surgical methods of dealing with infective processes originating in chronic ear disease. The *Annual* may be recommended to all practitioners who wish to keep themselves up to date in their professional knowledge.

Studies from Institute for Medical Research, Federated Malay States. Vol. II, No. 1: An Enquiry into the Etiology and Pathology of Beri-Beri. By HAMILTON WRIGHT, M.D. London: J. & A. Churchill. 1902.

THE Malay Peninsula is manifestly a specially well adapted place in which to study the etiology of beri-beri, for in it are found representatives of nearly all the Oriental races affected by this disease; and the statistics that Dr. Wright has collected of the incidence of beri-beri in regard to nationality, habits, diet, &c., are of very great interest, and worthy of close attention. We cannot, however, here go into these figures, and we must content ourselves by giving a summary of the conclusions arrived at. In the first place, then, cases of beri-beri are divided into three groups—(a) Acute pernicious cases, which are always fatal; (b) acute cases, which run a course of from three to six weeks, leaving the patient paralysed; and (c) cases with residual paralysis, which persists after the specific virus has ceased to act—these last are analagous to cases of post-diphtheritic paralysis. The origin of the disease is thought to depend on a specific micro-organism (not yet isolated), which gains entrance by the mouth, and multiplies chiefly in the stomach and duodenum. This germ will escape with the fæces, and so infect certain places, depending on the personal habits of those affected. Cases are quoted to show that the incubation period is short—ten to fifteen days. Other causes, such as arsenical poisoning, a deficient nitrogenous diet, mouldy rice, are shown not to be possible in a large proportion of the cases tabulated. The disease is more prevalent in low-lying districts, and during the north-east monsoon, when the rainfall is greater and the humidity of the atmosphere increased. A number of clinical records are also given illustrating many of these points, and the account of the *post-mortem* examinations of those cases that died is very full and of no little pathological interest.

In reviewing this work of Dr. Wright as a whole, one cannot but be impressed by the value of many of the observations he has made regarding the etiology of beri-beri; but, at

the same time, we do not think he is justified in some of his conclusions. To say that loss of appetite and a feeling of oppression in the epigastrium, being early symptoms of the disease, point to the primary lesion being in the stomach or duodenum, seems to us absurd. Neither do we agree that the congestion of the mucous membrane of the stomach and duodenum found *post-mortem* "indicates beyond doubt the local action of a specific organism." It is quite as likely that the stomach lesion (such as it is) is secondary to the neuritis, as is so often seen *post-mortem* in other nervous diseases. But Dr. Wright promises to give more ample proof of his theory in a future publication, which we trust will soon be forthcoming.

A System of Clinical Medicine, dealing with the Diagnosis, Prognosis, and Treatment of Disease, for Students and Practitioners. Vol. I. By THOMAS D. SAVILL, M.D.
London: J. & A. Churchill. 1903.

WE have numerous good manuals of descriptive or systematic medicine, and equally admirable works dealing with clinical methods and clinical medicine, but far too long have these different methods of approaching the study of disease been kept overmuch apart, and our thanks are due to Dr. Savill for giving us, in reasonable dimensions, this manual with clinical and systematic medicine properly incorporated one with the other.

This book fills a distinct want. It will serve as a clinical index of diseases, and the advantages of passing in rapid review all the possible diseases which may give rise to a patient's leading symptom must be very obvious to those engaged in clinical work. We have frequently made use of it for this purpose, and have invariably found it helpful. We thoroughly agree with the author that his plan gives a truer view of nature's facts than one which deals with disease as so many entities; and, further, we consider that this work should materially help the student and practitioner to make better use of their larger text-books where such entities are described.

This, the first volume, deals with all the so-called local diseases (diseases causing local symptoms) and the acute specific fevers (microbic disorders). It is thoroughly practical and is eminently personal; throughout its pages Dr. Savill offers to his readers the ripe fruit of a vast experience, and

we have the greatest confidence in recommending this work to both students and practitioners of medicine.

Contributions to Practical Medicine. By SIR JAMES SAWYER.
Fourth Edition, with many Revisions and Additions.
Birmingham: Cornish Bros. 1904.

ONLY a couple of years have elapsed since the third edition of this work appeared, a fact which is rather remarkable in the history of a book of this kind, especially as it is written by one who has in great measure withdrawn from the active work of teaching. It suggests that Sir James has many friends and admirers in the profession. The volume contains the same nineteen essays as appeared in the last edition, but these have been thoroughly revised in the light of two years' additional experience in consulting work.

Manual of Intra-gastric Technique. By GEORGE HERSCHELL,
M.D.Lond. London: Henry J. Glaisner. 1903.

ALL those desirous of commencing the practice of modern methods in the diagnosis and treatment of gastric affections will find a very good guide in Dr. Herschell's little book, and even the physician of experience will get here many most useful hints and much valuable information. The directions for using the various intra-gastric appliances are set forth with a clearness and minutiae of detail that admit of no ambiguity in the mind of the reader, though the armamentarium—impedimenta?—of this writer seems to us unnecessarily elaborate, and is calculated to deter anyone from aspiring to become a "gastro-enterologist." The chapter devoted to the examination of the stomach contents is, however, somewhat curt, and when we consider the space occupied in describing and figuring some simple piece of apparatus, we cannot but wonder that the author has not stopped to explain what most of his readers have probably forgotten, viz., what is meant by a decinormal solution. The application of electricity to the stomach is very fully considered. We are grateful to Dr. Herschell for drawing our attention to the defects of the English stomach-tube, and acknowledge our indebtedness for keratin-coated capsules containing carbonate of bismuth and for the chain cachet

devised by him, both of which should prove exceedingly useful accessories in the examination of the stomach by *x*-rays. We notice a few typographical errors, viz., "pastel" for pastille, "Uffelman's" for Uffelmann's, "hydrocloric" for hydrochloric, and "tritate" and "tritration" for titrate and titration.

Disease of the Pancreas: Its Cause and Nature. By EUGENE L. OPIE, M.D. Philadelphia and London: J. B. Lippincott Company. 1903.

IN his preface, the writer of this book states that his object is "to approach the unsolved questions which concern this organ," and he has dealt chiefly with the etiology and pathology of the various forms of pancreatic disease.

The early chapters treat fully of the anatomy and histology of the gland; the variation in the arrangement of the ducts is gone fully into, and their condition in one hundred cases, examined by the author, is recorded. The relationships of the parenchyma to the ducts is also shown. Special attention is paid to the islands of Langerhans in the chapter on histology, and a very complete review of their morphology and physiology is given. Opie concludes that the study of pathological changes, associated with diabetes mellitus, affords convincing evidence that these structures control the assimilation of sugar, and he shows that chronic interstitial inflammation of the interacinar type, and a peculiar form of hyaline degeneration of obscure origin, affect chiefly the islands of Langerhans, and are responsible for a large number of the cases of pancreatic diabetes.

A large chapter is devoted to the pathology of diabetes mellitus in relationship to lesions of the pancreas, and the condition of the gland in nineteen cases, examined microscopically by the author, is detailed. Opie considers that the occurrence of pancreatic diabetes is much more frequent than has been supposed, and he suggests, with a view to determining its relative frequency, that the gland should be weighed in every case of diabetes, and that sections should be prepared from the head, body, and tail of the organ, and the character and extent of the lesions noted; in the absence of pathological changes the number of the islands of Langerhans in different parts of the gland should be counted in order to exclude congenital defect.

The chapters on acute pancreatitis, fat necrosis, and chronic

pancreatitis are well written. The first-mentioned lesion, Opie holds, is frequently caused by the impaction of a small calculus at the outlet of the diverticulum of Vater. The association of cholelithiasis with acute pancreatitis, the anatomical peculiarities of the diverticulum, and the fact that the lesion can be produced experimentally by the injection of bile into the pancreatic duct are important points demonstrated by this writer. We can strongly recommend this book to all interested in pancreatic pathology.

An Atlas of Human Anatomy, for Students and Physicians.

By CARL TOLDT, M.D. Translated by M. EDEN PAUL.
Section III—Myology. London: Rebman, Limited. 1904.

IN this section the muscles are well shown in 150 coloured figures. There is nothing meretricious in the plates, but careful scrutiny convinces one of their accuracy. The bony origins of the muscles are given in special plates, showing the bones with the origins cut quite short. This is a great improvement on the usual way of depicting such origins, and more than makes up for the want mentioned in our review of the section on osteology.

The part concludes with a supplement on the anatomy of hernia. This will be found of great value to the surgical reader, as the various names given to the "ligaments" in this region are fully given.

Text-Book of Diseases of the Eye. By H. F. HANSELL, M.D.,
and W. M. SWEET, M.D. London: Rebman, Ltd. 1903.

THIS in many respects seems a good book; it is thoroughly up to date, and we can recommend it to students as a reliable guide. There are, perhaps, few things in it with any claim to originality, but the authors have given the latest information on most ophthalmic topics. Thus, we have a section on the "Economic Value of Vision," and in their description of the methods of treating squint they figure Worth's amblyoscope.

In some places the authors do not treat the subject matter with sufficient detail, but, as already said, the book is a trustworthy one. It is very extensively and well illustrated, and the printing and general style of the book leave nothing to be desired.

ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

M E D I C I N E.

By WALTER K. HUNTER, M.D., D.Sc.

A Case of Pathological Sleep lasting Twenty Years. By Dr. Lancereaux (*Bull. de l'Acad. de Méd.*, 8th March, 1904).—The patient was a woman over 40 years of age, and she came of a neurotic stock. The father was alcoholic, the mother subject to attacks of hysteria, and three sisters all showed symptoms of unstable nervous systems. When a child, the patient was always delicate and nervous, but it was not till the age of 22 that, as the result of a fright, she was seized by hysterical convulsions lasting twenty-four hours. Subsequent to this she fell into a profound sleep, which lasted for the next twenty years. There was now complete anæsthesia of the whole body, except at the mid-sternum, where there was a limited area of hyperæsthesia; and, on pressure at this point, a hysterical convulsion was at once induced. Otherwise these convulsions came on spontaneously every four to six weeks, and they were of the typical hysteria major type. Between the attacks there was some rigidity of muscles, so much so that the jaws could not easily be separated for the purposes of alimentation, and so the patient was always fed by means of a tube with liquid nourishment. Urine and fæces were passed involuntarily and often at long intervals. There was considerable emaciation, and the general aspect of the patient was that of one in a profound sleep. The knee reflexes were exaggerated, and ankle clonus was easily produced. After some four or five years the painful zone over the sternum disappeared, and from this time onwards the convulsive seizures almost entirely ceased. The patient was now in the condition of profound sleep, from which it was impossible to waken her. This went on for the next fifteen years, when an abscess situated about the head of the radius was discovered, and shortly after convulsions again set in similar in character to those which inaugurated the onset of the illness. After the convulsions ceased the patient gradually awakened. She showed signs of moving in bed, passed her hand over her eyes, opened the eyes, and responded to stimulation of the skin. The anæsthesia was now found to have entirely disappeared, as had also the rigidity of muscles. The patient had no memory or knowledge of events which occurred immediately prior to, or during, the twenty years' sleep, but of events before that again she had quite complete recollection. She now complained of pain in the chest, and on examination she was found to be affected with chronic tuberculosis of the lungs; from this disease she died shortly afterwards.

Result after Six Years of a Gastro-Enterostomy for Gastric Ulcer. By Prof. Folet (*L'Echo Méd. du Nord.*, 13th March, 1904).—The patient, a man, aged 62, first came under observation with hæmatemesis and other symptoms pointing to the presence of a chronic gastric ulcer. He was treated by rest and careful dieting, and improved very greatly; but, shortly after returning to his work, the symptoms would again present themselves, so that in the course of three years he was in hospital several times. Gastro-enterostomy was performed in June, 1897, with great relief to the patient. But seven months later he complained of severe epigastric pain, and, as this continued at intervals for the next two months, he was again operated on, the stomach being opened, and the artificial gastro-intestinal opening forcibly

dilated. Since this time he has enjoyed excellent health, and digests any ordinary diet with complete comfort.

A Case of Brain Tumour in which the Symptoms were greatly lessened by Lumbar Puncture. By Drs. Charvet and Bancel (*Lyon Méd.*, 10th April, 1904).—The patient was a man, aged 56, who came under observation first on 3rd July. For two or three months previous to that time he had pains in the legs, called sciatica, and his mental condition was not so clear as formerly. He had become dull, sullen, suspicious, seemed preoccupied, and spoke little. Some three years before he had had one or two epileptiform seizures; but there was no return of these, and no other symptom of disease in the nervous system. On examination, it was noted that the patient was dull, but could reply to questions, though not very intelligently. He complained of pain in the head, but there was no paralysis of muscles, and the tendon reflexes were normal. There was no impairment of sensation. The right pupil reacted to light; the vision of this eye was $\frac{3}{4}$, and ophthalmoscopic examination showed an oedematous disc with distended veins. The vision of the left eye was nil, due to cataract and other old-standing disease. The day following the above observation lumbar puncture was performed, and 20 c.c. fluid withdrawn. A few hours later the vision had improved to $\frac{3}{4}$, and ophthalmoscopic examination showed the veins to be less dilated. The next day the vision was still $\frac{3}{4}$, and the patient mentally seemed less dull. Nine days later, however, he became comatose, and died. The *post-mortem* examination showed a large glioma occupying the whole of the left third frontal convolution, except a narrow band at its most anterior aspect (it is not known whether the patient was left-handed or not), and extending right into the lateral ventricle. The authors consider that the tumour growth had been present for many years, and that the symptoms of the last two months were due to increasing intracranial pressure.

An Infant with Imperforate Duodenum. By Dr. Voron (*Lyon Méd.*, 10th April, 1904).—The child at birth seemed very healthy; it cried lustily, and showed no malformation of any kind. A few hours after, the normal amount of meconium was passed. The child was then put to the breast, at which it sucked vigorously; but suckling had not gone on for more than two or three minutes when everything that had been taken was vomited again. The milk returned seemed unchanged; it was not coagulated, and contained no bile. Frequent attempts were made to suckle the child, but always with the same result. The milk was readily swallowed, but after a few minutes in the stomach was invariably vomited. Abdominal examination gave little information. There was some indefinite resistance to palpation in the epigastrium, but no evidence of a dilated stomach. Emaciation was rapid, and loss of weight very considerable. The bodily temperature was low (95° the day before death), and the amount of urine secreted almost nil. Death supervened six days after birth, ushered in by tetanus-like convulsions affecting the four limbs.

At the *post-mortem* the stomach was found slightly dilated. Beyond the ring of the pylorus was a *cul-de-sac*, about as wide as would hold a pigeon's egg, and which represented the first portion and half the second portion of the duodenum. The distal end of the sac was firmly adherent to the head of the pancreas. The remainder of the duodenum also formed a *cul-de-sac*, its upper end being likewise firmly adherent to the pancreas. The duodenum consisted, therefore, of two portions completely separated the one from the other by the head of the pancreas, and careful investigation could show no evidence of the remains of intestine uniting the two together. The bile-duct and pancreatic duct opened into the second duodenal sac soon after its origin.

In discussing the case, the author refers to several other cases of imperforate duodenum, but he can give no satisfactory explanation of its origin.

SURGERY.

By ARCH. YOUNG, M.B., C.M., B.Sc.

Appendicitis: How do the First Morbid Changes in the Appendix Arise?—Dr. Carl Lauenstein (Hamburg) attempts to answer this question in a recent number of the *Münchener medizinische Wochenschrift* (No. 14, 1904).

The appendix forms the point of origin of by far the greatest number of cases of appendicitis. Foreign bodies, as such, apart from the nuclei of the stercoliths, do not play an essential rôle in the etiology. We can say with the greatest probability that the disease extends from within outwards, i.e., from mucosa to serosa, and, thanks to Tavel and Lauz, we know that a whole series of bacteria has been found in appendicitis, and in the peritonitis occasioned by it.

Notwithstanding the above knowledge, founded on experience of the last ten years, the question of the preliminary conditions and the final cause of the ailment has not yet been finally determined. Lauenstein thinks that, in judging of this, the anatomical features and physiological properties of the appendix must serve as the starting point. Its length, evacuation (*Lichtung*), direction, structure, and blood-supply come into consideration here. Little is known as to its physiology. The mucous membrane contains glands like those of the cæcum, also globular glands in great number. That faeces, and with them bacteria, normally enter its lumen is certain.

To enable us to answer the question as to the final causes of appendicitis, we must go back to the beginning. This beginning he terms "appendicitis initialis." Essentially this appendicitis initialis consists in changes in the walls extending from within outwards; these changes are swelling, loosening of the mucous membrane, small-celled infiltration, necrosis of epithelium, punctiform hæmorrhages, flattish ecchymoses, and even superficial ulceration.

Stercoliths occur in undoubtedly healthy appendices, and are to be looked upon as infection carriers rather than the exciting cause of the disease. That the bacteria contained in them play a part in appendicitis is undoubted. But how do the initial changes arise? Riedel's view as to bleeding being the initial cause, and giving entry to bacterial invasion, Lauenstein cannot accept. Both hæmorrhage and other wall-changes he considers as secondary.

The prime factor, he thinks, is alteration of the position (*Lageveränderung*) of the appendix, with consequent closure of its lumen at its base or elsewhere. The closure causes retention of infective material in the shape of faeces and stercoliths, and, as Friedrich has demonstrated, the bacteria then have a marked effect under the influence of pressure (*Druckwirkung*).

The appendix with this first, perhaps quite short, occlusion undergoes its first morbid changes. These may not cause the patient to make any complaint, the lumen may become free after a short time as the appendix resumes its normal position, and the pathological process may be discontinued, to recur again with the next closure of the lumen. If this closure be of longer duration, the inflammatory process may involve the serosa, and the appendix may then be fixed in the abnormal position, and the free communication between its lumen and that of the cæcum shut off permanently.

In the early stages, characterised by the above-mentioned changes, the stercolith acts as a carrier of infection; in the later stages, where we have distortion, compression by adhesion, stenosis, &c., the concretion may play a more dangerous rôle by pressure on the inflamed and altered mucous membrane.

One must also bear in mind the effect on the circulation in the mesentericium of the changes in position (torsion, &c.), as, when the circulation has been impaired, the bacteria act more readily.

The severity of the results of the bacterial attack depends on many factors (contents, length and position of the organ, preceeding attacks, nature of bacteria, &c.)—G. H. E.

Surgery of Hydrocephalus.—B. Merrill Ricketts discusses this subject, particularly from its historical aspect, in the *Medical Fortnightly* of 25th January, 1904.

The following among other conclusions are drawn by him, and are quoted in the *Canada Lancet* for April:—

Hydrocephalus (ventricular or meningeal) may develop *in utero*, or at any time throughout infant or adult life.

The cases of spontaneous recovery are probably numerous, especially in infant life, when the arachnoid is alone involved.

All cavities may unite, with or without external rupture. When so, it is usually fatal. Spontaneous rupture may occur externally or subcutaneously, with an occasional recovery.

The effusion may be into the lateral, third, or fifth ventricle, or it may be in the arachnoid, or in all.

Syphilis and rickets have been assigned as causes of hydrocephalus, but have never been proved to be such. The causes are yet unknown.

It is probable that the greater number of cases of hydrocephalus, whether of the third or fifth ventricle, or of the arachnoid variety, can be cured by some form of drainage.

Continuous drainage by seton, or the repeated use of trocar, has given the best results in the way of benefit or cure. Spinal drainage has been practised to but a very limited degree, and its value is as yet undetermined.

Subcutaneous drainage has not as yet resulted in a cure, but there seem to be many possibilities for this method.

Results from drainage are more favourable if it is done when the presence of fluid is first detected.

The secret of curing arachnoid hydrocephalus by drainage probably lies in obliterating the arachnoid cavity. However, this can hardly be so with hydrocephalus of the third and fifth ventricle. The cardinal principle in this, as in all operations upon the brain, is asepsis.—A. Y.

Chlorine as a Disinfectant for the Hands.—In the *American Journal of Obstetrics* (January, 1904) Dr. H. Stewart advocates the use of the following as a disinfectant for the hands:—

Acetic acid, ...	2 drs.
Calx chlorinata, ...	4 drs.
Aq. sterilis, ...	1 quart.

He finds that five minutes' careful cleansing and scrubbing with this solution has always, in his experience, inhibited the growth of streptococci, staphylococci, and bacilli coli communes after hands had been intentionally contaminated with pure cultures of these.

He estimates the antiseptic power of the solution as equal to 1 in 500 corrosive sublimate solution.—A. Y.

A Case of Intussusception in which 26 inches of Intestine were passed per Rectum.—H. Percy Potter, M.D., F.R.C.S., records in the *West London Medical Journal* for April, 1904, the case of a boy who suffered from an acute attack of intussusception and recovered completely by natural processes, over two feet of bowel, with some attached mesentery, being passed per rectum twenty-five days after the onset of the first symptoms. The bowel so passed was entirely small intestine. Potter thinks that "probably in this case the entering or central tube was the ileum, the receiving tube likewise ileum," that, in fact, the intussusception was purely *ileal*.

It may be said that on his admission to hospital, five days after the onset of symptoms, the patient was operated on with a view to the relief of intestinal obstruction. He was much collapsed, and the operation was, therefore, hurried. Laparotomy was carried out, the abdomen being opened over the appendix region. No obstruction was discovered. From the time of operation, however, the state of the patient gradually improved, and he passed the

alough of small intestine described above three weeks later. His recovery was thenceforward uneventful. He is now in the best of health.—A. Y.

Polypoid Tumours of the Female Urethra: the Explanation of their Vascular Nature.—In the *Annales des Maladies des Organes Génito-urinaires* (1st March, 1904) Raymond Grégoire discusses the symptomatology, etiology, and pathological anatomy of the chief benign growths of the female urethra, including the conditions known in this country as "urethral caruncle."

With regard to their almost constant rich blood-supply, he concludes as follows:—

"Polypi of the female meatus are papillomata with circulation so exaggerated that the name of angeo-papillomata might well be given to them."

Also, he points out that—"The urinary meatus is an ectodermic formation like the anal canal, and like the genital orifice. Like the last, it is surrounded by the corpus spongiosum, which is, as a rule, atrophic, but in some cases preserves its vascular character."

"Perhaps," he says, "it is in virtue of this relation that meatal tumours have usually an exaggerated vascular development." Perhaps, also, in this way we can explain why certain of these new growths participate in the general turgescence of the genital passages during the menstrual flow.—A. Y.

GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

Co-education of Men and Women.—Dr. Howard, of Baltimore, contributes an article on sex differentiation and education to the *New York Medical Journal* (20th February, 1904), and there is a leading article in the same number of the paper on this subject. When higher education is so much before the public, it is well that the medical profession should know what is the result of the medical experience in America on this aspect of the question. Dr. Howard says, "After sufficient trial, the mingling of the sexes in colleges is shown to be inexpedient, if not dangerous to the future welfare of all concerned. . . . The influence of menstruation has effect on the position of women. For the proper understanding of the sex relations of men and women, this cannot be ignored. Every neurologist—every physician who has a proper understanding of physiological psychology—recognises the existence of disturbing, teasing emotions; of conditions of affectability, of a suggestive state, during the menstrual period. However much these may be suppressed, whatever influence the occupied mind may have in controlling these psychic conditions, they nevertheless exist, and continued suppression of these natural emotions will ultimately cause riotous physiological and psychological disturbances. . . . A certain subject in literature will leave opposite, or at least different, impressions in the minds of the youth and young woman hearing the same lecture, these divergent interpretations being dependent upon the psychic and emotional differentiation existing at the time. A teacher well informed on the psychology of sex, when teaching a class of girls, will state a fact in a different mood and manner, will express it in other colours, than he would to a class of young men. When it has to be indifferently stated, it ceases to leave a true and individualistic impression. The male's view of life is distinct from that of a normal female. . . . Let man pursue his studies in manly craft, woman in womanly craft. As a general statement, it is safe to say that the woman of twenty years of age attending co-educational institutions has not learned one womanly craft of specific use to her sex. Many have no knowledge of the hygiene and physiology of their

sex. Some have false, and a few perverted, ideas of their economic and social position." In commenting on this, the editor says—"Every reader who is not hopelessly committed to the fad of co-education must, we think, admit that Dr. Howard's statements rest on facts, and that his deductions are such as cannot be evaded. His main contention is that the artificial levelling of sex distinctions involved in the co-education scheme must result in the more or less complete blotting out of the maternal and domestic instincts of the young women subjected to it. We do not see how this can be denied. If it is admitted, what result, provided it were produced on a large scale, could be more subversive of physical improvement in the race?" The editor proceeds to refer to a work entitled *Woman's Unfitness for Higher Education* (New York: The Grafton Press). Of its author, he says, "Dr Van De Warker is one of the well known gynæcologists of the country. And his experience as a school commissioner enabled him to add to his professional insight into the physiological needs of young girls a close knowledge of the conditions prevalent in co-educational institutions. As we are compelled to view the matter, Dr Van De Warker, while admitting the feasibility and desirability of educating women to the same degree as men, argues that the two should not be educated in the same way—that is, together. He shows very conclusively, as it seems to us, that to exact the same tasks of women as of men, without regard to their physiological limitations, tends powerfully to invite grave derangements of health. He argues, too, and we fear his argument cannot be gainsaid—that co-education as at present conducted in many of the colleges of the United States, has a tendency to undermine the morality of numbers of young women."

Normal Saline Solution.—In an editorial, the *New York Medical Journal* (6th February, 1904) draws attention to a paper in the *London Pharmaceutical Journal* (16th January), in which it is stated that the physiological normal solution is apt by chemists to be confounded with the chemists' normal volumetric solution of sodium chloride. The writer, Mr. Francis, states that, to his actual knowledge, in two cases this latter solution has been supplied for physiological purposes when normal saline solution was asked for, and in one case, certainly, the patient died; in the other, the result is unknown. The chemical normal solution is nearly ten times stronger than the physiological. The editorial strongly urges the rigid adherence to the term "*physiological salt solution*" when ordering 0.6 per cent salt solution for physiological purposes.

Treatment of Post-Partum Hæmorrhage.—Quoting from the *Deut. Med. Wochens.* (January, 1904), the *New York Med. Jour.* refers to a paper by Fritsch, who recommends two devices for the control of post-partum hæmorrhage. One is to seize the uterus and push it over the symphysis firmly, pack the wedge-shaped area behind it with gauze or towels, and apply a tight binder for twenty-four hours. This is applicable for cases with uterine atony. When the cervix is torn, suture is uncertain if the parametrium is involved. A double compression should then be used, after the expulsion of the placenta, by pushing the vulva upwards as far as possible, and the anteflexed uterus downwards into the pelvis. In from fifteen minutes to three quarters of an hour, the external hand may be replaced by a heavy sandbag. Fritsch claims, among other advantages of his methods, the absence of danger of septic infection, the saving of blood which would otherwise be lost if suturing or tamponing were attempted, the rational method of hæmostasis by compressing the bleeding surfaces upon each other, and the lack of necessity for after-treatment once the bleeding has ceased.

The Effects of Removal of the Ovaries.—The *New York Med. Jour.* (5th March, 1904) contains a leading article on this subject signed by Dr. Craig. The writer says that there is much diversity of opinion in the profession in regard to the physiological results of this operation, and he

proceeds to give an outline of his opinions based on the observation of actual cases and on a study of the literature of the subject. There seems to be little doubt that the ovary performs a dual function; first, the maturation and periodical discharge of ova for race procreation; secondly, the elaboration of an ill understood but plainly manifest internal secretion which in some manner, probably through the sympathetic nervous system, presides over the metabolism and nutrition of the uterus. The first of these functions is open to study. Even a macroscopic examination of an ovary will often decide its ability or inability to perform the function of ovulation. We are thus far, on the contrary, entirely dependent on clinical manifestations in judging of the integrity of the second function. The presence or absence of the ability of the ovary to ovulate seems to have no influence on a woman's general health, and it is often impossible to say in a given case whether sterility be due to absence of ovulation. On the other hand, the second function, of which we know so little, seems to manifest its absence by plain signs, such as amenorrhœa, uterine atrophy, and the "hot flushes." The amenorrhœa is not the result of uterine atrophy, for it often precedes this latter by several months. The result of castration will largely depend on the suddenness of the lesion involved—that is, on the previous presence or absence of internal secretion from the ovaries removed, and on the lack of opportunity for the establishment of compensation. Presumably a very small portion of the ovary will supply sufficient internal secretion to maintain the normal equilibrium. In many cases, bilateral cystomata have been removed without the manifestations of a suddenly induced menopause. This is evidently the result of the ovarian loss being so gradual as to permit nervous compensation. The effects of removal of the ovaries are analogous to the production of diabetes by removal of the pancreas; but, had the analogy been complete and death followed the total removal of the ovaries, gynecologists would long ago have learned to conserve safely a sufficiency of ovarian tissue, and should learn this now.

Dr. Craig proceeds to discuss the question of sexual desire. In this matter, he agrees with Lawson Taft that it is the rule for sexual desire and ability for gratification to return after removal of the ovaries, and to remain normal for years. Likewise excessive accumulation of fat is the exception, though, of course, women who have been emaciated naturally resume their normal condition of nutrition. The loss of femininity, the acquisition of mannishness, the growth of superfluous hair, and the deepening of the voice do not occur. To conclude, a portion of ovary should always be preserved if its retention can be accomplished without greater risks than those incident to the loss of the internal secretion.

Notes on Eighty-Seven New Cases of Sponges, Forceps, and other Foreign Bodies Accidentally Left in the Abdomen.

—F. V. Neugebauer contributes this article to the *Zentralbl. f. Gynäk.* (23rd January, 1904). So recently as 1900, the author published one hundred and eight such cases, and this series is collected from cases published since that time. He gives a short note of each of the cases which he has collected, and comes to the conclusion which he quotes from Weir:—"I consider it almost impossible to guard against this contingency absolutely. We can only, by great care, reduce them to a minimum." Among other precautions recommended, he suggests very careful anæsthesia and the Trendelenburg position as likely to obviate many of the causes which lead to sponges, &c., being left behind. The author evidently has difficulty in getting skilled anæsthetists, and lives in fear of prosecutions for malpractice.

Ventrofixation for Retrodeviations of the Uterus.—Dr. Bardescu, of Bucharest, describes an operation which seems to be that already described by Doléris. The abdomen is opened in front, either by a longitudinal incision, or by a transverse one below the line of the pubic hair. In two cases operated on, the transverse incision of the skin gave sufficient space to make the longitudinal incisions necessary in the deeper parts. The pelvis is

explored to relieve adhesions and so on, and the uterus is then brought up to the abdominal wound. A button-hole incision is then made through all the tissues except skin on each side of the wound, and a loop of round ligament is brought up through each button-hole. The deeper part of the original wound is closed, and the two loops of round ligament stitched together outside the fascia. The skin edges are then brought together in the usual way. Where there is cystocele, the bladder is brought up and stitched to the abdominal wall before the wound is closed.

DISEASES OF THE THROAT.

By JOHN MACINTYRE, M.B., C.M., F.R.S.E.

Professor Dunbar's Antitoxin in Hay Fever.—During the early summer months of this year, considerable attention will be paid to the administration of this remedy in hay fever. It cannot be said that last year's trials were a fair test, and consequently, notwithstanding the somewhat disappointing reports of some observers, the antitoxin will be largely administered this summer.

Sir Felix Semon, in a private communication, states "recently in the *Berliner Klinische Wochenschrift* for 14th and 21st March, a new paper, by Drs. Lübbert and Frasnitz, the assistants of Professor Dunbar, has been published, in which they attribute the want of success which has attended the trial of the remedy in the hands of others to the fact that the antitoxin was not used nearly frequently enough, and in which they give rules which I have condensed." *Rules.*—(1) It is very essential that the patient, during the hay fever period, should sleep with doors and windows closed; (2) only a small quantity of the fluid ought to be poured each time into the empty little tube, and the latter, as well as the pipette, should be once daily boiled and thoroughly cleaned; (3) no serum bottle ought to be used longer than one week at the utmost, as after that time decomposition of the fluid takes place; (4) the powdered serum (pollantin powder) ought to be sniffed up into the nostrils by means of the little spade inserted in its little stopper (a small quantity of the powder only is required); (5) the remedy, in its fluid form for the eyes, and in its powdered form for the nose, should be used regularly as a prophylactic measure, the first application to be made immediately after waking, and further ones—particularly when the patient has been in the open air—as soon as the least irritation is felt.

The Removal of Foreign Bodies from the Bronchi (*Korrespondenz Blatt. f. Schweizer Aertze*, 15th March, 1904).—Dr. Bodmer points out that there were ten such cases treated by means of Killian's bronchoscope in 1902. In 1903, double the number of cases have been recorded. Dr. Bodmer combined the use of Killian's apparatus with x-rays. Tracheotomy was performed under chloroform, but a general anæsthetic was not required for the detection of the needle in the right bronchus. The patient rapidly recovered.

Pyrenol in Asthma (*Deutsche Aerztezeit*, Heft. 20, 1903).—Dr. Burchard records some cases of bronchial asthma successfully treated by means of pyrenol. In some cases, the relief is obtained after the first dose, and the improvement continued until, after two or three weeks, the attack completely disappeared.

Treatment of Ozæna by Collargol (*Archives Internationales de Laryngologie, &c.*, January and February, 1904).—Dr. Roques has described his method of treatment in these cases by means of collargol. All crusts,

discharge, and offensive matters are removed, so as to leave the mucous membrane as clean as possible. Powdered collargol and sugar of milk, 1 to 30, is blown into the nostrils twice daily at least. He prefers this method to solutions, and gradually diminishes the number of applications and the quantity as improvement takes place.

PUBLIC HEALTH AND INFECTIOUS DISEASE.

By HUGH GALT, M.B., C.M. GLASG., D.P.H. CAMB.

Ankylostomiasis. By A. E. Boycott, M.B., and J. S. Haldane, M.D. (*Journal of Hygiene*, January, 1904).—This is the second article on the above subject, dealing with (a) distribution of ankylostomiasis; (b) life-history of *ankylostoma*, and conditions affecting its development; (c) diagnosis of ankylostomiasis; (d) its treatment; (e) its prevention.

The authors draw attention to the unexpected discovery of the *Ankylostoma duodenale* as the cause of a serious outbreak of anæmia among the men engaged in the construction of the St. Gothard Tunnel. The main distribution is recognised to be within about 35° north and south of the equator, although minor outbreaks are recorded in Europe—in Northern Italy and Hungary. The difficulty of recognition is exemplified in the case of the Cornish outbreak described by the authors, who consider that for this reason the disease is likely to be much more widespread than is usually believed. In cases of ankylostomiasis occurring in the United States, Stiles discovered that the worm is of a different species from that described in European cases. In warm countries, ankylostomiasis occurs among the agricultural population, and seems to be nearly always associated with gross faecal pollution of the soil round dwellings. The authors also mention, though giving wrong details, Professor Stockman's case occurring in a man recently returned from military service in India.

The life-history of the parasite shows that the adult worms live in the upper part of the intestine and mostly about the upper part of the jejunum. They may live for several years in this position. Thus, a person once infected may spread the disease, even in another country, years after he has himself acquired the infection.

The ova are never far advanced in development when passed in the fæces, usually being in the four-cell to sixteen-cell stages, unsegmented ova not having been seen by the authors. The cause of this is agreed to be that the ova require free oxygen for their development.

At temperatures from 16° to 30° C., the ova hatch within five days. The larvæ, after moulting once at least, reach a stage at which they are actively motile. This is the "encapsuled" and infective stage, beyond which the larvæ do not pass outside of the body. While infection is chiefly through the mouth, Looss showed, in 1898, that infection through the skin was possible.

With regard to diagnosis, the authors point out that the positive diagnosis depends on the discovery of ova in the stools. The examination of the latter is simplified by the fact that in the great majority of cases they contain the ova in very large numbers and fairly uniformly distributed. The fæces are examined under the microscope direct, after slight thinning with water if necessary. The appearances of the ova are characteristic, particularly the size (about 6 mm. long diameter) of the ovum, the smooth, clear, transparent egg-shell, and the grey-coloured contents divided into rounded masses, usually from four to sixteen in number. Where no eggs can be found, administration of thymol sometimes produces specimens of the adult worm in the evacuations. *Anguillula* eggs, which are rather similar to those of *ankylostoma duodenale*, practically never occur as such in the stools; they hatch within the alimentary canal, and appear as larvæ.

Medicinal treatment is summarised essentially as a preliminary calomel purge, followed next morning by three successive doses, at intervals of two hours, of 2 grammes of thymol as emulsion or in capsules. Male fern is also efficacious, and is universally employed at the Westphalian collieries.

With reference to prevention, it is shown that the larvæ can hardly exist in water which is perfectly transparent to the eye; they are also completely got rid of by filtration. Careful cleanliness in eating, drinking, and general habits will suffice to prevent infection. Regulations for prevention of faecal pollution in mines, &c., is called for in this connection. Attempts at disinfection by disinfectant solutions, &c., have been generally unsuccessful.

Books, Pamphlets, &c., Received.

Notes on the Composition of Scientific Papers, by T. Clifford Allbutt, M.A., M.D. London: Macmillan & Co., Limited. 1904. (3s. net.)

The Meaning of a Modern Hospital, by W. Bruce Clarke, M.A., M.B. London: Longmans, Green & Co. 1904. (1s. net.)

The Clinical Causes of Cancer of the Breast and its Prevention, with Analyses of a Hundred Cases, by Cecil H. Leaf, M.A., M.B. Westminster: Archibald Constable & Co., Limited. 1904. (2s. net.)

A Complete Handbook of Midwifery for Midwives and Nurses, by J. K. Watson, M.D. London: The Scientific Press, Limited. 1904. (6s. net.)

Atlas and Epitome of Operative Gynæcology, by Dr. Oskar Schaeffer. Authorised Translation from the German, with Editorial Notes and Additions, edited by J. Clarence Webster, M.D. With 42 Coloured Lithographic Plates and many Text Illustrations, some in Colours. London: W. B. Saunders & Co. 1904.

Ophthalmological Anatomy, with some Illustrative Cases, by J. Herbert Fisher, M.B., B.S. London: Hodder & Stoughton. 1904. (7s. 6d.)

Obstetrics for Nurses, by Joseph B. de Lee, M.D. Fully Illustrated. London: W. B. Saunders & Co. 1904.

What we Owe to Experiments on Animals, by Stephen Paget. London: The Scientific Press, Limited. 1904. (1s. 6d. net.)

The Case Against Anti-Vivisection, by Stephen Paget. London: The Scientific Press, Limited. 1904. (2s. net.)

Encyclopædia Medica, under the general Editorship of Chalmers Watson, M.B., F.R.C.P.E. Vols. IV to XIV. Edinburgh: William Green & Sons.

Essays and Addresses, by the late John Young, M.D. With a Memoir. Glasgow: Jas. MacLehose and Sons. 1904.

County Council of Lanark: Thirteenth Annual Report of the County and District Medical Officer. 1903.

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR
THE FOUR WEEKS ENDING 21st MAY, 1904.**

	WEEK ENDING			
	April 30.	May 7.	May 14.	May 21.
Mean temperature, . . .	47·4°	46·7°	48·1°	50·2°
Mean range of temperature between day and night, . .	11·8°	14·5°	13·1°	12·6°
Number of days on which rain fell, ...	6	7	7	3
Amount of rainfall, . ins.	0·47	1·66	0·63	0·38
Deaths registered, . . .	302	308	282	299
Death-rates, ...	19·7	20·1	18·4	19·5
Zymotic death-rates, . . .	4·3	2·2	2·0	1·9
Pulmonary death-rates, . .	6·2	6·9	4·5	6·3
DEATHS—				
Under 1 year, ...	73	54	49	66
60 years and upwards, . .	47	58	64	55
DEATHS FROM—				
Small-pox, ...	3	1	4	2
Measles, ...	10	12	9	10
Scarlet fever, ...	2	3	4	3
Diphtheria, ...	5	2	3	1
Whooping-cough, ...	5	13	11	10
Fever, ...	2	2	1	0
Diarrhoea, ...	8	5	9	7
Croup and laryngitis, . .	...	...	3	...
Bronchitis, pneumonia, and pleurisy, ...	58	58	41	58
CASES REPORTED—				
Small-pox, ...	22	25	11	15
Diphtheria and membranous croup, ...	9	18	21	8
Erysipelas, ...	21	22	16	13
Scarlet fever, ...	38	25	26	17
Typhus fever, ...	...	...	...	...
Enteric fever, ...	7	4	5	4
Continued fever, ...	4	1	...	...
Puerperal fever, ...	1	1	5	1
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* Measles not notifiable.

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